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SEEDS

Vegetable, Flower *and* Field

AGRICULTURAL IMPLEMENTS

Farm, Poultry, Dairy *and* Bee Supplies

The I. W. SCOTT COMPANY

500 LIBERTY AVE. - 113 DIAMOND ST

PITTSBURGH, PA.

Roses, Trees, Shrubs, Plants and Bulbs

1876 — 1927



General Information and Suggestions

PRICES. While we expect but few changes during the year, should increased costs demand an advance, or reduced costs justify a reduction, we reserve the right to change our prices, notifying the customer before shipping in case of advance, and refunding the difference if price has been reduced.

SPECIAL DISCOUNT LIST

On orders amounting to \$10 and upward, selected from the following list, a discount of

FIVE PER CENT

will be allowed when cash is remitted with order.

Vegetable and Flower Seeds
Bulbs and Nursery Stock

Insecticides	Plant-Boxes
Plows	Pruning Tools
Harrows	Ladders
Land-Rollers	Hand Mowers
Lawn-Rollers	Grindstones
Pulverizers	Feed-Cutters
Manure-Spreaders	Root-Cutters
Lime-Sowers	Grinding-Mills
Grain-Drills	Grain-Cleaners
Seed-Sowers	Corn-Shellers
Corn-Planters	Cider-Mills
Weeders	Gasoline Engines
Cultivators	Pumps
Planet Jr. Goods	Washing-Machines
Garden Tools	Wagons
Sprayers	Churns
Dusters	Cream-Separators

Ask for Special Prices on lines not quoted in catalogue.

Special quotations will be given on large quantities of Seeds, Fertilizers, Implements, and other goods, on receipt of specifications.

Many of our lines are handled by reliable dealers and can be purchased through them.

ORDER EARLY

Our rush season comes in the months of April and May. To relieve congestion and reduce to a minimum the delay in filling orders, we solicit the coöperation of our customers by placing their orders early and taking delivery before the rush begins.

"Order your seeds early." This means "early in the season," and if you call at the seed store it means "early in the morning." The seedsman's busy months are April and May, his busy days, Saturdays and Mondays, and his busy hours from 11 to 2. By avoiding these rush periods you get more prompt and efficient service.

DELIVERY

All prices are f. o. b. Pittsburgh, except where otherwise noted.

REMITTANCES

Money should be sent by Money Order, Registered Letter, Bank Draft, or Check. Amounts less than \$1 may be sent in postage stamps.

Write your Name, Post Office, State, and Shipping Station plainly on every order. State whether you want the goods forwarded by parcel post, express, or freight.

When goods are shipped by freight or express to points where there is no agent, our responsibility ceases when we secure a receipt from transportation company.

PARCEL POST SHIPMENTS

Vegetable and Flower Seeds. We deliver free, by parcel post, all Vegetable and Flower Seeds in packets, ounces, quarter-pounds and pounds. On Peas, Beans, Corn, Onion Sets, etc., in pints or quarts, the amount to be added for postage is given in connection with the prices. On half-pecks and pecks, postage must be added at the regular zone rates given in parcel post table herewith.

Bulbs and Nursery Stock. Parcel Post rates are given in connection with the prices.

Other Goods. We have named "postpaid" prices in the catalogue on all other mailable articles.

DOMESTIC PARCEL POST RATES Within the U. S. and Possessions, zones from Pittsburgh			For First Pound	For Each Ad- ditional Pound
First Zone	within 50 miles		\$0 07	\$0 01
Second	" " 50 to 150 "		07	01
Third	" " 150 to 300 "		08	02
Fourth	" " 300 to 600 "		09	04
Fifth	" " 600 to 1000 "		10	06
Sixth	" " 1000 to 1400 "		11	08
Seventh	" " 1400 to 1800 "		13	10
Eighth	" over 1800 miles		14	12

Parcels can be insured as follows: Up to \$5, 5 cents; \$5 to \$25, 8 cents; \$25 to \$50, 10 cents; \$50 to \$100, 25 cents, which insures against loss or damage.

INDEX WILL BE FOUND ON THIRD COVER PAGE OF CATALOGUE

1876

1927



COMPLETE SERVICE FOR FARMS AND GARDENS

YEAR by year it becomes increasingly plain that a greater interest is being taken in farms and gardens. This is particularly true in the newer suburban communities surrounding the larger cities from which town dwellers have escaped to enjoy the pure air and spaciousness of the country.

In many cases suburban homes are still undeveloped and await only the suggestion and assistance afforded by an institution of reputable standing and long experience. To such cooperation we dedicate this catalogue and offer our entire resources.

To the farmers and the market-gardeners who contribute so essentially to the health, happiness, and prosperity of the state and nation, we extend an unusually complete service. We invariably supply carefully selected seeds, thoroughly tested and approved; reliable implements, tools, insecticides, fertilizers, and all the many items necessary to modern economical farming and gardening.

VEGETABLE AND FLOWER SEEDS. Not chasing after loudly heralded novelties, but always endeavoring to add every new sort of real value that will be of definite advantage, we submit an up-to-date list of vegetable and flower seeds, offered with the confident assurance that each item in it has been tested and found reliable. Critical market-gardeners have for many years been depending upon us for the crops on which their own prosperity rests, and experience with them has helped us in meeting the needs of home-gardeners. To all alike we offer the best it is possible for us to provide.

ROSES, SHRUBS, VINES, FLOWERING PLANTS. We are now able to render complete home service as well as the more purely business matter of supplying gardens and farms. Home service is no less important than the others, because all men know how important a part of business success is a well-groomed prosperous appearance of both a man and his home. This department is devoted to supplying material to make home grounds attractive and in harmony with well-kept farms and gardens.

FIELD SEEDS. It is easy to increase or to lose in crop results because of the seed strains used. Those we offer, selected with special reference to their purity and germination, are dependable, and the sort which makes price but a secondary consideration.

AGRICULTURAL IMPLEMENTS. America leads the world in aids to increase the efficiency of manual labor. Carefully selected from the products of the oldest and most reliable manufacturers, we confidently present an up-to-date line.

DAIRY, POULTRY, AND BEE SUPPLIES. We have specialized in those items which will best aid the farmers who do more than till the soil. Thus we have come to be the recognized headquarters for dairymen and poultrymen and bee-keepers.

Notwithstanding the extended presentation in this catalogue, we handle many articles not here mentioned. If you do not see in these pages what you want, write to us about it. If we cannot furnish it we will do our best to tell you where you can get it. Our success is founded on your satisfaction.

OUR MAIL-ORDER TRADE. The large increase in our mail-order trade the past year was very gratifying to our Company. While we are always glad to have our customers come to our store, inspect our goods, and leave their orders, our list of regular mail-order customers is constantly growing, and, appreciating the confidence thus placed in us and in our goods, it shall always be our aim to see that this branch of our trade receives special attention.

VEGETABLE SEEDS

The home-gardener, as well as the commercial grower, will find in our Vegetable Seed Department an unusually complete list of the best varieties in cultivation. There are varieties to suit every taste and every purpose. In describing them we have endeavored to make selection easy by telling the advantages as well as the disadvantages of each sort, describing as accurately as possible just how each should perform under normal conditions and good cultivation.

Quality First. For almost a half-century we have been supplying the most critical market-gardeners in our immediate territory with the best and purest strains of Vegetable Seeds. The steady increase of our trade during all these years among our home-gardeners, as well as those from distant points, is the best evidence that our seeds give satisfaction.

The test of a seed is the crop it produces—not the price paid for it. It is always our endeavor to supply only the highest bred and most vigorous seeds it is possible to grow. Even the best of seed is none too good when growing conditions are unfavorable, but poor seed will not produce good results, no matter how much care and help the crop receives. The old saying, "The best is the cheapest," applies with greater force to seeds than to any other commodity. So with us, we aim to supply the highest quality at a fair price; quality comes first.

Whether you order by the packet or the pound, you will receive the same high quality of fresh seeds. All of our packet seeds, both vegetable and flower, are put up from exactly the

same stocks that we use for pounds, pecks and bushels, so the small gardener can depend upon getting seeds as fresh and as choice in every way as those which the most critical market-gardeners demand. No order is too small to merit our best attention.

Quantity Rates. Half-bushels will be charged at bushel rates; half-pecks will be charged at the peck rate; and half-pounds will be charged at the pound rate.

Seeds by Mail. We pay the postage on all packets, ounces, pounds and fractions thereof, unless otherwise stated. **On Beans, Corn, and Peas** add 8 cents per pint or 10 cents per quart to cover postage.

NON-WARRANTY. We give no warranty, expressed or implied, as to description, quality, productiveness, or any other matter of any seeds, bulbs, or plants we sell, and will not be responsible for the crop. No responsible seedsman gives any warranty. If the purchaser does not accept the seeds on these terms they are to be returned at once.

ASPARAGUS *Three ounces of seed will sow a 100-foot row; 15 pounds will sow an acre*

Tender young Asparagus shoots fresh from the garden! Those who know Asparagus only as it comes out of a can or with the fine flavor lost in hours of travel from the grower's fields to the table, have no idea of the delicious treat in store for them. Yet, contrary to common belief, Asparagus is no more difficult to grow than any other garden crop.

Equally good results may be secured by planting seed or roots; seed is cheaper but from one to two years' time is saved by starting with roots.

Once established, an Asparagus bed will continue to bear bountiful crops for years; so remember that a little care and patience at the start will be well repaid. Choose a well-drained spot and dig the soil deeply, pulverize it thoroughly and, at the same time, work in a goodly quantity of fertilizer. If the soil is heavy, mix in sand or coal ashes also. If you start with seed, sow it early in the spring, in shallow drills 12 to 15 inches apart, and when the plants are about 4 inches high, thin out the weak and crooked ones, leaving about four good strong plants to the foot.

The following spring, dig up the roots and transplant them to the permanent bed, in rows at least 3 feet apart, setting them 1½ to 2 feet apart in the rows. The roots should be well spread out, with the crown or top about 3 inches below the general level of the bed. Barely cover at first but fill in around the plants as they grow until the level of the surface is reached. No cuttings should be made the first year after transplanting but the second season will bring a good crop. Each fall, cut down the bushy tops and fork in a liberal dressing of coarse manure.

MARTHA WASHINGTON RUST-RESISTANT. A new variety developed by the U. S. Department of Agriculture. It produces abundant crops of large, tender stalks and is practically immune from "rust" and other Asparagus diseases. Without doubt, the finest strain of Asparagus now available. **Seed,** pkt. 10 cts., oz. 25 cts., ¼lb. 60 cts., lb. \$2.

Two-year-old roots, by mail, postpaid, \$2 for 50, \$3.75 per 100; by express, not prepaid, \$11 for 500, \$20 per 1,000.

CONOVER'S COLOSSAL. Large green stalks.

PALMETTO. Comes early; stalks light green.

BARR'S MAMMOTH. Stalks nearly white; largest size.



Asparagus, Martha Washington

SEED of above three varieties, pkt. 10 cts., oz. 15 cts., ¼lb. 30 cts., lb. \$1. **TWO-YEAR-OLD ROOTS,** by mail, postpaid, \$1.10 for 50, \$2 per 100; by express, not prepaid, \$1.75 per 100, \$5.25 for 500, \$10 per 1,000.

French Artichoke

This highly prized salad can be grown in our climate, provided the plants are given light protection over winter. Start the seed indoors and give the same treatment as you would tomatoes, transplanting to the garden in May. The plants are perennial, producing their best crop the second season.

An ounce of seed will produce 500 plants

LARGE GREEN GLOBE. The best variety. Pkt. 15 cts., oz. 75 cts., ¼lb. \$2.75, lb. \$10.

Broccoli

A kind of hardy cauliflower which thrives best in moist fall weather. Grow like late cauliflower, sowing in May and transplanting in June or early July.

An ounce of seed will produce 2,000 plants

WHITE CAPE. Heads of medium to large size, creamy white in color and of delicate flavor. Pkt. 10c., oz. 60c., ¼lb. \$2, lb. \$7.

PURPLE CAPE. Tinged with purple; considered a little hardier than other varieties. Pkt. 10 cts., oz. 60 cts., ¼lb. \$2, lb. \$7.

Brussels Sprouts

Delicious and easy to grow. Cultivate like cabbage, sowing the seed in April or May, either in a coldframe or in a sheltered spot in the garden, and transplant in June or early July, setting the plants 2 feet apart. The "sprouts" are like miniature cabbages growing along the main stem. Their flavor is improved by frost.

An ounce of seed will produce 2,000 plants

HALF DWARF IMPROVED. Pkt. 10 cts., oz. 40 cts., ¼lb. \$1, lb. \$3.



Brussels Sprouts

**INOCULATE THIS
SEED WITH
FARMOGERM**

BEANS

**Everyone Can
Grow Beans**

Few crops yield more bountiful returns from limited space. There are several classes of Beans and many varieties: all are rich in food value, containing a high proportion of muscle-building protein; served as "Snap" or "String" Beans they are particularly rich in vitamins. There are Green-podded, Wax-podded, and Lima Beans, and of each there are dwarf or bush and pole or running varieties. Generally speaking, the bush kinds bear earlier but the Pole Beans bear more heavily and for a longer time. If you have plenty of space, our advice is to grow some of both, depending on the dwarf sorts for the first pickings and on the pole varieties for the late or main crop. Between Green-podded and Wax-podded varieties there is little to choose, although the Green-podded Beans are generally preferred in local markets.

Growing Bush or Dwarf Beans in the Garden. Even a poor soil will grow Beans, although the heaviest yields are, of course, obtained on well-matured and moderately heavy loams. Wait until the ground is warm before you sow—early May is a good time to make the first sowing in this latitude. Open up furrows $1\frac{1}{2}$ to 2 feet apart and drop the Beans about 3 inches apart in the furrow, covering them $1\frac{1}{2}$ to 2 inches deep. Later plantings should be covered $2\frac{1}{2}$ to 3 inches deep. Keep the soil well loosened around the plants from the time they are large enough to cultivate, but avoid touching them when they are wet with rain or dew, as this will nearly always cause the pods to "rust." For a constant supply of "String" Beans all summer make a new sowing every two weeks from early May until the first of August.

A quart of seed will sow 100 feet of furrow, $1\frac{1}{2}$ to 2 bushels, depending on variety, will be required for an acre when the seed is planted in drills.

Dwarf Green-podded Beans

BOUNTIFUL. A splendid variety, well-named, for it is extremely productive and always reliable. It is hardy and thrives on a variety of soils. In a good many gardens it is the first Bean to come into bearing and it continues to bear for a long time if the pods are picked as fast as they become ready for use. The pods are flat, of good size, and handsome appearance, always



Bountiful Beans

stringless, tender until full grown and of excellent flavor. Many gardeners grow no other Bean but Bountiful, securing a constant supply for the table all summer long by making success on plantings. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

BURPEE'S STRINGLESS GREEN-POD. Another general favorite. Stringless Green-Pod is early and productive, with pods a little shorter than Bountiful but round, thick, and very meaty; always perfectly stringless and tender even when old. If your soil is heavy clay, you will probably find it the best variety to grow. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

GIANT STRINGLESS GREEN-POD. A little later to bear than the kinds described above but a very dependable producer of big crops. A good Bean to plant to succeed the first early varieties. The pods are long, round, and meaty, always stringless and tender, dark green and very handsome. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

BLACK VALENTINE. A popular Bean among the market-gardeners on account of its hardiness, attractive appearance, and good shipping qualities. Black Valentine is medium early and a reliable heavy cropper, bearing long, straight, round pods which, however, are of only fair quality. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

IMPROVED EARLY RED VALENTINE. As the name indicates, this is an improved extra-early strain of the old favorite, Red Valentine. Like the original type, it is extremely prolific and a popular Bean with the market-gardeners. The pods are round, meaty, and well-flavored, but become stringy by the time they reach full size. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3, bus. \$11.

LONGFELLOW. An early, hardy, prolific variety with long, round, dark green pods of medium quality. A reliable cropper even under adverse conditions; preferred by market-gardeners in some sections. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3, bus. \$11.

FULL MEASURE. One of the newer varieties which is coming into demand for both market and home-gardens. It is early and under favorable conditions will outyield all other Green-podded Beans. The pods are of good size, round, thick, stringless, tender, and of excellent quality. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

STRINGLESS GREEN-POD REFUGEE. An improvement on the old 1000-to-1, being perfectly stringless even when the pods have reached full size and are old enough to shell. The plants are large and thrifty, producing heavy crops; pods large, round, and fleshy. Ideal for canning. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$3.50, bus. \$13.

REFUGEE, or 1000-to-1. A strong-growing, late-bearing variety, which will probably produce more bushels to the acre than any other green-podded Bean. Largely grown for canning. Pods are long, round, tender, and of fine flavor but become stringy when full grown. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3, bus. \$11.



Giant Stringless Green-Pod Beans



Sure-crop Stringless Wax Beans

SURE-CROP STRINGLESS WAX. A strong-growing, early variety well described by its name, for it is a most dependable producer of large crops under all conditions. The pods are of good size and most attractive in appearance, being broad, semi-round, and bright yellow in color, entirely stringless, brittle, and of fine quality. We can highly recommend Sure-Crop for both market and home-gardens. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

WARDWELL'S KIDNEY WAX. An old favorite, well known to gardeners everywhere. It is hardy, early, and of splendid quality. The pods are broad, flat, brittle, and almost stringless, waxy yellow in color. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$3.50, bus. \$13.

ROUND-POD KIDNEY, or Brittle Wax. This Bean is notable for its exceptional quality, being superior in flavor, remarkably brittle and tender, and absolutely stringless even after the Beans have ripened. The pods are long and round, bright yellow in color and very handsome. With good culture it produces very heavy crops. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$3.50, bus. \$13.

HARDY WAX. A vigorous grower which seems to withstand adverse weather conditions better than most other Wax Beans and is, consequently, often preferred for very early sowing. It produces good crops of rather short but meaty, round pods which are stringless and of excellent quality. $\frac{1}{2}$ pt. 15c., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

KEENEY'S RUSTLESS GOLDEN WAX. A remarkably vigorous sort which is less liable to "rust" than other Wax-podded Beans. A good producer of medium-sized, flat, well-filled stringless pods. $\frac{1}{2}$ pt. 15 cts., pt. 25c., qt. 50 cts., pk. \$3.25, bus. \$12.

IMPROVED GOLDEN WAX. Pods are flat and a little longer and thicker than those of the original Golden Wax. Hardy and prolific; quality fair. A profitable Bean for the market-gardener. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

GOLDEN-EYE WAX. An old variety, popular with market growers. Early, producing good crops of semi-round, yellowish white pods. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

PENCIL-POD BLACK WAX. A late-bearing variety, valuable for mid-season use. Not a heavy yielder but the long, slender, round pods are of fine quality. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

IMPROVED PROLIFIC BLACK WAX. A reliable, productive, second-early kind, bearing quite long, round, well-filled pods of excellent quality. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

Add 8 cts. per pint, 10 cts. per quart on Beans to cover postage

DWARF GREEN-PODDED BEANS FOR SHELLING

DWARF HORTICULTURAL. A fine producer of green Shell Beans; useful as a "String" Bean also, for the young pods are tender and meaty. The ripe Beans are round and speckled with purplish red. $\frac{1}{2}$ pt. 15 cts., pt. 25c., qt. 50 cts., pk. \$3.25, bus. \$12.

WHITE KIDNEY. Largely grown for dry Shell Beans. Plants are tall, vigorous, and productive. The pods are of good size and showy but tough, and the ripe Beans are large, kidney-shaped, pure white and do not discolor when cooked. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$3.50, bus. \$13.

WHITE MARROWFAT. The favorite Bean for baking. A good producer of large, white Beans of fine quality. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

RED KIDNEY. Resembles the White Kidney except that the ripe Beans are red in color. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

WHITE NAVY, or Pea Bean. Used mostly for field planting; a sure cropper and extremely prolific. The dried Beans are small, round, and white. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.50, bus. \$9.

DWARF WAX-PODDED BEANS

The Yellow- or Wax-podded Beans are considered more handsome in appearance and bring higher prices in some sections than the Green-pods.

Generally speaking, they are good producers, but where rust or mildew is prevalent, do not stand up quite so well as the Green-podded varieties.



Wardwell's Kidney Wax Beans

DWARF WAX-PODDED BUSH BEANS, continued

DAVIS WHITE WAX. Hardy, early, and productive. The pods are long, flat, waxy white in color and very handsome, standing shipping well but becoming stringy when full grown. The dry Beans are white, tender, and of fine flavor when baked. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

HODSON WAX. A medium early or main-crop Bean, which sells readily on the markets on account of its fine appearance. Produces heavy crops of long, flat pods. A good shipper but rather mediocre in quality, becoming stringy when full grown. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

BUSH LIMA BEANS

One of the finest treats the garden offers is fresh, green Lima Beans. But remember that the seed is tender and will not grow in cold weather or wet ground. Wait until warm weather has surely come (the last of May is generally safe in this latitude), and then sow in a warm, sunny spot, preferably in a rich, mellow soil. Sow Bush Lima Beans in furrows about 2 inches deep and at least 2 feet apart, spacing the seeds 3 to 4 inches apart in the furrow. They will sprout quicker if planted with the "eyes" down. Later on the plants may be thinned to stand 8 to 10 inches apart as they yield best if given plenty of room. The Bush Limas bear earlier than the Pole varieties and are, therefore, more useful where the growing season is short.

A quart of seed will sow 100 feet of furrow; a bushel will sow an acre

BURPEE IMPROVED. A vigorous, productive variety. The bushes are large and bear loads of big, broad pods, each containing 4 to 6 Beans of the largest size and finest quality. Medium early. $\frac{1}{2}$ pt. 25 cts., pt. 40 cts., qt. 75 cts., pk. \$4.75, bus. \$18.

FORDHOOK. Probably the most popular Bush Lima and one of the best for the home-garden for it is extra early and extremely prolific, bearing good-sized pods which contain 3 to 5 large, thick, meaty Beans of delicious quality. $\frac{1}{2}$ pt. 25 cts., pt. 40 cts., qt. 75 cts., pk. \$4.75, bus. \$18.

BURPEE'S BUSH. A hardy, reliable variety; prolific, medium early, and of good size and quality. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$4, bus. \$15.

WOOD'S PROLIFIC. An improved strain of the Dwarf Sieva or small-seeded Lima. It is very productive and hardy; valuable for planting where the large-seeded Limas do not thrive. The quality is extra-fine. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$4, bus. \$15.

POLE LIMA BEANS

These take longer to bear than the Bush Limas, but yield larger crops and continue to bear for a longer period. The seed is usually planted in hills, at least 3 feet apart each way, dropping 4 to 6 Beans to the hill. Set poles 8 to 10 feet long in each hill to support the vines.

A quart of seed will plant 100 hills; 20 quarts will plant one acre

LEVIATHAN. A general favorite, being early, vigorous, and productive, bearing loads of giant pods, well filled with large tender Beans. One of the most reliable varieties for the home-garden. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$3.75, bus. \$14.

EXTRA-EARLY JERSEY. Come into marketable size a week earlier than other varieties. Good size and fair quality. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$3.75, bus. \$14.

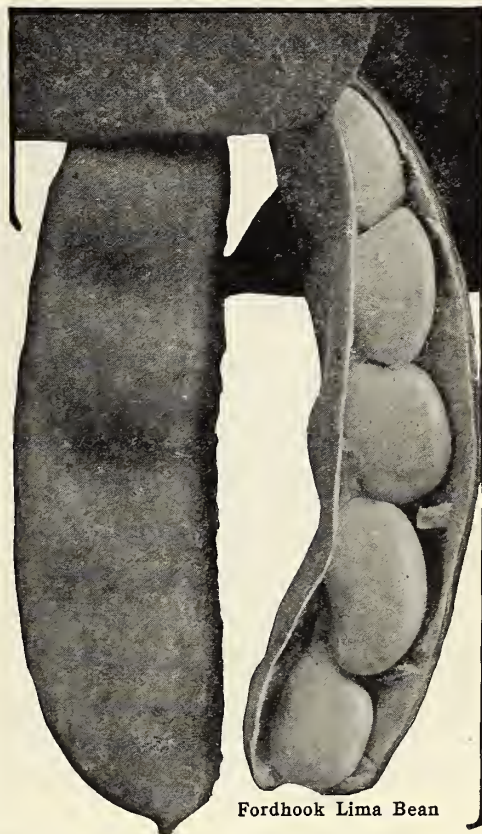
SIEBERT'S EARLY. Extra-early and one of the most productive. When freshly shelled the Beans are large and thick through and of fine quality. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$3.75, bus. \$14.

DETROIT MAMMOTH. The largest podded variety in cultivation. Medium early, extremely vigorous and prolific, bearing pods 9 to 11 inches long, containing 5 to 7 mammoth Beans of excellent quality. $\frac{1}{2}$ pt. 25 cts., pt. 40 cts., qt. 75 cts., pk. \$4.75, bus. \$18.

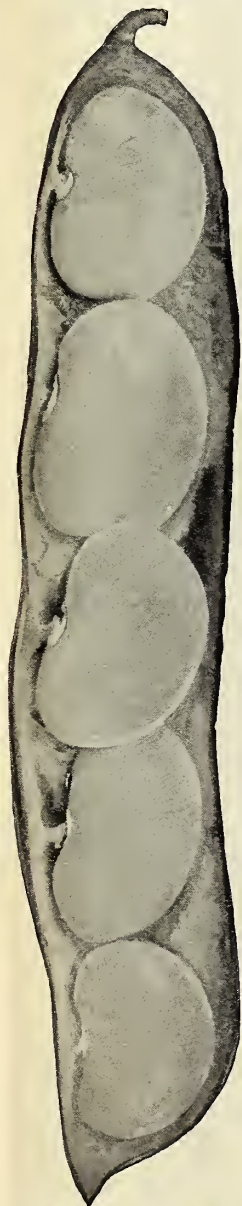
KING OF THE GARDEN. The strongest growing and most productive of the large Limas, bearing broad pods 5 to 6 inches long, containing 4 or 5 large, flat Beans. Allow only two vines to each pole. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$3.75, bus. \$14.

CARPINTERIA. This medium-late variety sets the standard for quality among Pole Limas. It bears large pods, containing 3 to 5 Beans which are very thick and mealy and retain their green color even when ripe. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$3.75, bus. \$14.

LARGE WHITE. The old standard large-seeded Pole Lima; medium early and vigorous. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$3.75, bus. \$14.

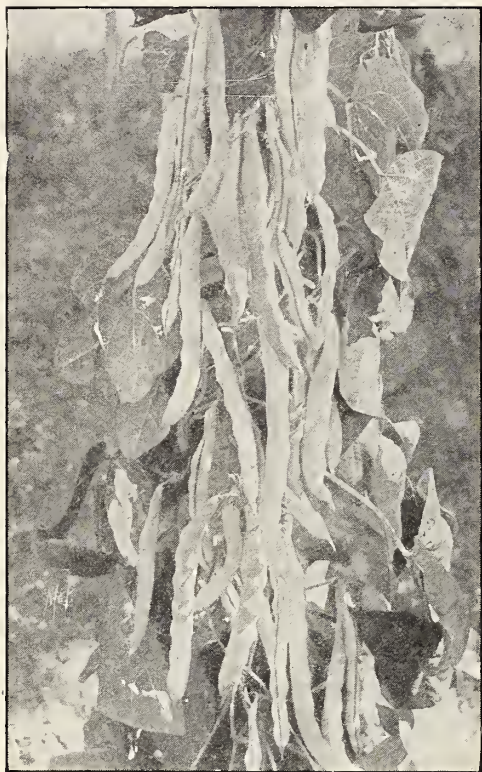


Fordhook Lima Bean



Leviathan Pole Lima Bean

All seeds postpaid except Peas, Corn and Beans, for which add 8 cents per pint, 10 cents per quart to cover postage



Kentucky Wonder Beans

ing great clusters of green pods which are 5 to 6 inches long, semi-round, meaty, stringless, tender, and richly flavored. Useful also as a Shell Bean. $\frac{1}{2}$ pt. 20c., pt. 30c., qt. 60c., pk. \$3.50, bus. \$13.

BURGER'S GREEN-POD STRINGLESS. Also known as the White-seeded Kentucky Wonder. Extra-early and prolific, bearing round, brittle pods of fine quality. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$3.50, bus. \$13.

KING HORTICULTURAL. An improvement on the old London Horticultural, or Speckled Cranberry. Late but productive; pods short, broad, pale green streaked with red. The Beans are extra-good, either green or dry. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$3.25, bus. \$12.

SCARLET RUNNER. A distinct type largely used as an ornamental climber. It grows rapidly; the foliage is luxuriant and the bright scarlet blossoms are most attractive. Pods light green. The dried Beans are used like Limas. $\frac{1}{2}$ pt. 25 cts., pt. 40 cts., qt. 75 cts., pk. \$5.25, bus. \$20.

Add 8 cts. per pint, 10 cts. per quart on Beans to cover postage

Mangel-Wurzel or Cattle Beets

The Mangels furnish large quantities of nutritious and healthful food for stock and poultry—yields of twenty-five to thirty tons and more per acre are often obtained. Sow the seed in April or early May and when the plants are 2 or 3 inches high, thin them out to stand 8 to 10 inches apart. Harvest before frost and store in pits outdoors or in a dry, frost-proof cellar.

Five to 6 pounds of seed will sow an acre

LONG RED MAMMOTH. The heaviest yielder, producing enormous roots which grow largely above ground and are easy to harvest. Particularly fine for milch cows. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 50 cts., 5 lbs. \$2.25.

NORBITON GIANT LONG RED. Somewhat similar to the above. Excellent for feeding to stock. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 50 cts., 5 lbs. \$2.25.

RED GLOBE. Oval or globe shaped, giving heavy yields on shallow soils. A good keeper. Oz. 10c., $\frac{1}{4}$ lb. 20 cts., lb. 50 cts., 5 lbs. \$2.25.

GOLDEN TANKARD. Large, long roots unusually high in feeding value. A splendid cropper on fairly deep soils. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 50 cts., 5 lbs. \$2.25.

WHITE SUGAR. Very productive, rich in sugar and especially good for stock feeding. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 50 cts., 5 lbs. \$2.25.

KLEIN WANZLEBEN. Rigorously selected for high sugar content and the most popular variety with the sugar-beet growers. We offer a productive, easily grown strain. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 50 cts., 5 lbs. \$2.25.

FOR TABLE BEETS AND SWISS CHARD, SEE PAGE 7

WAX- AND GREEN-PODDED POLE BEANS

The Pole Beans do not come into bearing so quickly as the Bush varieties but they yield much larger crops and, if kept picked, will continue to bear for several weeks. As the seed is rather tender, they should not be started until about two weeks after it is safe to sow Bush Beans. They succeed best in a well-drained mellow soil which has been liberally enriched with manure. The usual practice is to grow them in hills placed 3 to 4 feet apart, using poles about 8 feet long to support the vines. Drop 6 to 10 Beans in each hill and cover 2 inches deep, thinning out when the plants are well started so as to leave only 3 or 4 of the strongest on each pole. By using string or wire as support, one stout pole may be made to serve several hills.

A quart of seed will plant 100 to 200 hills; from 8 to 10 quarts will plant an acre according to the size of the Beans

KENTUCKY WONDER. The most popular Pole Bean. It is early, reliable under all conditions, and immensely productive, bearing long, round, dark green pods which are tender, stringless when young, and of fine quality. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$3.25, bus. \$12.

KENTUCKY WONDER WAX. Similar in vigor and productiveness to the green-podded Kentucky Wonder but the pods are broader and light yellow in color, fleshy and brittle and slightly stringy. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$4, bus. \$15.

GOLDEN CLUSTER WAX. Extra-early and bears for a long season. The pods are of medium length, broad and flat, waxy yellow and most attractive in appearance. In flavor the Golden Cluster Wax Bean is unsurpassed, but the pods should be picked young for they become rather stringy when full grown. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 60 cts., pk. \$4, bus. \$15.



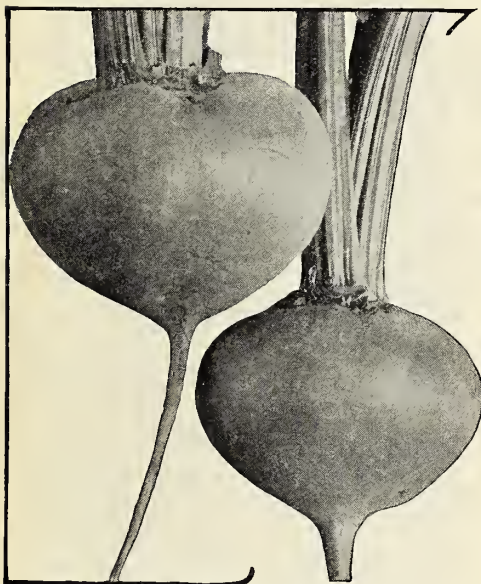
Long Red Mangel-Wurzel

BEETS

All seeds postpaid except
Peas, Corn and Beans

But little space is required to grow a good crop of Beets, and almost any soil will do, although the ground should be dug deeply and made fine and mellow with fork and rake if you want smooth, tender, well-developed roots. Make a first sowing as early in the spring as the ground can be worked. Scatter the seed in drills 15 to 18 inches apart, covering the seed about an inch deep and pressing the soil down firmly above it. When the seedlings are about 3 inches high, thin them out so that they will stand 3 to 4 inches apart in the row. The little Beets and "greens" removed in thinning, cooked together, make a delicious dish. Frequent cultivation will help to bring the crop along rapidly. As you harvest the Beets, pull out alternate plants, thus leaving more room for the rest to develop. You can insure a continuous supply of fresh young Beets for the table by making sowings every three to four weeks from early spring up to the middle of July. Late in June make a large planting to produce Beets for winter use. They should be harvested before frost and stored in pits outdoors, or in a dry cellar, covered with sand to prevent shriveling or drying out.

If you want to beat your neighbor with early Beets in the spring, start some seed in a coldframe or in a box indoors in February or March and reset the plants in the open garden early in April.



Crosby's Extra-Early Beet

CROSBY'S EXTRA-EARLY.

The standard early variety for both home-garden and market use. A very superior selection from the old flat Egyptian, being more globe-shaped, nearly as early, and of better quality. The skin is dark red and the flesh deep red.

Our stock is highly bred and runs very uniform in shape and size. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

EXTRA-EARLY EGYPTIAN. One of the earliest varieties, making medium-sized, flat, smooth roots with dark crimson skin and flesh. Fine for first crop. Specially adapted for transplanting from hotbeds in early spring. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 90 cts.

EARLY MODEL. An extra-early Beet that is top-notch in quality. The roots are uniformly globe-shaped, with smooth, dark red skin and fine-grained, crimson flesh, very sweet and tender. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

EARLY ECLIPSE. An old favorite, growing quickly to large size. The roots are nearly round, slightly pointed; flesh bright red but not so dark as the Egyptian types. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 90 cts.

EARLY WONDER. A new strain of Crosby's Egyptian Beet. Smooth, dark red flesh. Early. Extra-good for market-gardeners. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

EARLY BLOOD TURNIP. An old standby; round with small tap-root, dark red skin and bright red flesh of good quality. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 90 cts.

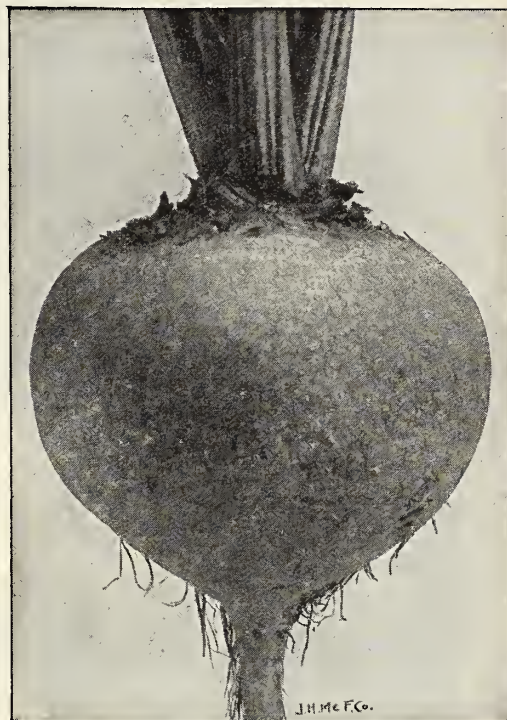
DETROIT DARK RED. This improved strain of the old Blood Turnip Beet is undoubtedly the most popular variety in cultivation. It is early, smooth, and uniformly globe-shaped, with dark red skin and flesh, fine-grained, tender and sweet; an ideal Beet for every purpose. If you grow only one Beet we recommend Detroit Dark Red. Excellent for winter keeping. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

CRIMSON GLOBE. A medium-early Beet of good globe shape and dark red skin and flesh. Popular with market growers. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 90 cts.

SWISS CHARD

This is a kind of beet which does not make edible roots but produces instead quantities of large leaves which are prepared like spinach. In addition, the stems and midribs make a palatable dish when stewed like celery. With growing appreciation of the valuable part that "greens" play in our diet, Swiss Chard has become one of our most popular vegetables. The seed should be sown in early spring and given the same culture as beets, except that the plants should be thinned to stand 8 to 10 inches apart. Pull the leaves off as they become ready and new ones will grow in their place.

WHITE, or SILVER. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.



Detroit Dark Red Beet



Swiss Chard



Early Flat Dutch



Copenhagen Market



OUR FROST-PROOF CABBAGE PLANTS

Will Mature Heads Two to Three Weeks Earlier Than Your Home-Grown Plants and Double Your Profits

OUR GUARANTEE. We will refund the purchase price to any customer who is dissatisfied with results produced when crop is matured. A person wanting extra early Cabbage for home use or market **CAN'T AFFORD NOT TO USE THESE PLANTS.**

There are a number of islands along the seacoast of South Carolina where the soil and climatic conditions are just suited for growing tough, hardy Cabbage plants during the winter and early spring. The seed is planted in the open field during the months of October, November, December, January, and February. The plants make a slow but steady growth, until at eight to ten weeks of age they are very tough and hardy, the buds are purple and the outer leaves a reddish brown. When in this condition they can be shipped to territory farther north and be planted in the open ground a month to six weeks sooner than the home-grown hotbed or coldframe plants. These **Frost-Proof Cabbage Plants** will stand a temperature of 20 degrees above zero without injury, the land freezing, or the plants being covered with ice, sleet or snow after they are planted will not injure them.

The top of the plant does not grow until your regular spring weather opens up, but the roots grow from the time they are planted, and just as soon as spring weather starts, the estab-

lished root-growth assimilates the fertilizer in the soil, the plants grow very fast, maturing headed Cabbage two to three weeks sooner than you can mature them from hotbed and coldframe plants.

You know what the difference in profit will be if your crop is matured and marketed before the general crop from home-grown plants is matured, but **to get this advantage these frost-proof cabbage plants must be planted a month or six weeks earlier than you would plant home-grown plants** from hotbeds or coldframes.

Our Cabbage plants are grown from the best Long Island grown seed and are shipped direct from our growing station in South Carolina by parcel post or express. We can fill orders from December 1 to May 15.

The plants when received will be somewhat wilted and have a hard, stunted appearance, which will be disappointing to persons who have never used these plants before. Regardless of appearance, they will produce the crop results.

Varieties: EARLY JERSEY WAKEFIELD, CHARLESTON LARGE TYPE WAKEFIELD, COPENHAGEN MARKET, SUCCESSION, and EARLY FLAT DUTCH

PRICES BY PARCEL POST, POSTAGE PAID.—In lots of 100, 200, 300, or 400 plants at 50 cts. per 100 plants; 500 plants for \$1.60; 1,000 or more at \$3 per 1,000 plants.

Orders are filled by the 100, not 250 or 350. These prices are for even quantities of one variety to package; if you ordered 200 of one variety and 300 of another variety you would pay at the 100 rate.

PRICES BY EXPRESS, BUYER PAYING EXPRESS CHARGES.—In lots of 1,000 to 3,000 plants at \$2 per 1,000; 5,000 or more at \$1.50 per 1,000. Plants are packed for express shipment, 1,000 or 2,000 plants of a variety to package. They weigh about 25 pounds per 1,000 plants, packed for shipment.

Order Early to Get Plants Delivered in Time. When we receive your order for these plants, we have to forward it to our growing station which takes several days. Plants are shipped direct to you from growing station. Plants cannot be pulled or shipped when beds are wet. We sometimes have a week or ten days of continued wet weather which prevents shipment. Orders may be sent any time after receiving our catalogue and plants will be sent when wanted, but shipping date should always be specified on the order.

ORDER OUR HARDY SOUTHERN FIELD-GROWN ONION PLANTS ADVERTISED ON PAGE 21

Martha Washington Asparagus

A new rust-resistant variety sent out by the U. S. Department of Agriculture, and, without doubt, the finest strain of Asparagus now available for American markets. Seed: pkt. 10 cts., oz. 25 cts., 1/4 lb. 60 cts., lb. \$2, postpaid. Two-year-old roots, by mail, postpaid, \$2 for 50, \$3.75 per 100; by express, not prepaid, \$11 for 500, \$20 per 1,000.



Copenhagen Market Early Cabbage

The round, solid heads weigh 6 to 8 pounds. It is highly productive because of its small, compact growth. The leading variety for both market and home. Pkt. 10 cts., oz. 35 cts., 1/4 lb. \$1, lb. \$3, postpaid.



Iceberg Lettuce

Crisphead type, making a very large, solid head, even in warm weather. The outer leaves are light green, tinged with brown at the edges, and the inner leaves are white, crisp, firm, and sweet. It stands a long time before going to seed. A fine variety for the home-garden. Pkt. 10 cts., oz. 25 cts., 1/4 lb. 75 cts., lb. \$2, postpaid.

Copenhagen Market Radish

One of the best small, early turnip-rooted sorts of crisp, fresh quality. It is bright red with white tips.

A short-leaved, quick-growing variety which is excellent for both forcing and the early garden outdoors. Pkt. 10 cts., oz. 15 cts., 1/4 lb. 40 cts., lb. \$1, postpaid.



Barden's Wonder Bantam Corn

A delicious new variety. Grains deep, and yellow and the ears are a third larger than Golden Bantam, just as early and equal, if not better, in quality. Grows 5 to 6 feet high. 1/2 pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.50, bus. \$9. Add 8 cts. per pt., 10 cts. per qt. to cover postage.



Golden Plume, or Wonderful Celery

Probably the earliest Celery on the market, making it profitable for the trucker and desirable in the home-garden. It is much like the familiar Golden Self-blanching in looks and flavor, but larger and stronger, and it holds its crispness and blanches very quickly. **Pkt.** 15 cts.; oz. \$1.25; 1/4 lb. \$4; lb. \$15, postpaid.



Marglobe Tomato

Introduced by the U. S. Department of Agriculture as a cross between Marvel and Globe, and seems to have retained the best qualities of both. It is claimed to be wilt-resistant and less susceptible to the "nail-head rust" which is prevalent in some sections. The fruits are of medium size, smooth, solid, and deep from stem to blossom end, with an irregular cell structure. They are borne in clusters of five to seven. Marglobe has had a very favorable reception in the past season. The vine makes medium to heavy growth. **Pkt.** 15 cts.; 1/2 oz. 85 cts.; oz. \$1.50; 1/4 lb. \$4; lb. \$15.



Laxtonian Peas

A very productive and profitable dwarf variety, and the acknowledged leader in quality among the early dwarf kinds. While a trifle taller than the usual dwarfs, it requires no support and is considered one of the very best for the home-garden. In many ways it resembles Pioneer, but is a shade better in quality, and both pods and peas are a richer, darker green. The fact that it is a very early, a very productive variety of exceptionally fine flavor gives it unusual value for the home-garden. 1/2 pt. 15 cts.; pt. 25 cts.; qt. 50 cts.; pk. \$3.25; bus. \$12. Add 8 cts. per pt., 10 cts. per qt. to cover postage.



CABBAGE

The chief requisites for growing Cabbage are rich soil and plenty of water. If your soil is hard and poor, add manure, the more the better, and dig it in thoroughly, making the surface as fine and mellow as possible. For early Cabbage, sow seed in hotbed or boxes indoors in January or early February. As transplanting time approaches (about April 15) "harden" the plants by exposing them to the air on warm days so that cold weather or even a light frost will not injure them after they are set out. Start the second crop in March or April. Winter Cabbage is sown in early May and transplanted to the garden in July.

Rows should be at least 2 feet apart, and plants from 1½ to 2 feet apart in the rows, according to variety, the early sorts requiring less space than the large-heading winter Cabbages.

Frequent doses of nitrate of soda will push the young plants along rapidly. The most troublesome pest is the green cabbage worm which, however, is easily discouraged by dusting with powdered arsenate of lead or similar insecticides. Cultivation to keep down the weeds and preserve the moisture in the soil is important. Give water if necessary during the dry spells.

An ounce of seed will produce 1,500 to 2,000 plants

COPENHAGEN MARKET. This highly bred Danish variety has come to be the leading early Cabbage, both for market and home-gardens. It grows rapidly to large size, maturing in about 100 days from sowing, as early as standard strains of Jersey Wakefield. Being of compact growth with few outer leaves, the plants can be set close together. The heads are round, extremely solid, with small core and of excellent quality. Heads average 6 to 8 pounds and yields per acre equal that of any other Cabbages, early or late. Pkt. 10 cts., oz. 35 cts., ¼lb. \$1, lb. \$3.

GOLDEN ACRE. A new early round-headed Cabbage, resembling Copenhagen Market, but 8 to 10 days earlier. Earliness and fine quality make it a leader of the round-headed varieties. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.75, lb. \$6.

SELECT EARLY JERSEY WAKEFIELD. For many years this has been a leader. It matures its rather small, solid, pointed heads in 100 days from sowing, and is one of the most reliable of the early sorts, being particularly hardy and resistant to frosts and unfavorable weather. It is favored in many markets, and, being of nice size and absolutely top-notch in quality, it is unexcelled for home use. Can be planted close together. Pkt. 10 cts., oz. 20 cts., ¼lb. 60 cts., lb. \$2.

CHARLESTON LARGE WAKEFIELD. A selection from Jersey Wakefield, maturing a week to ten days later and producing considerably larger, bluntly pointed heads. Solid and a good shipper. Pkt. 10 cts., oz. 20 cts., ¼lb. 60 cts., lb. \$2.



Danish Ballhead Cabbage



Glory of Enkhuizen Cabbage

GLORY OF ENKHUIZEN. A Dutch strain which closely resembles Copenhagen Market, but makes a little larger growth and matures a week to ten days later. Being less particular as to soil, it is a more reliable Cabbage for the home-garden and a splendid second-early for market. The heads are solid and of fine quality. It is a good keeper and is sometimes grown as a winter Cabbage. Pkt. 10c., oz. 25c., ¼lb. 75c., lb. \$2.50.

HENDERSON'S EARLY SUMMER. An old, well-known, second-early Cabbage of the flat or drumhead type. The heads are large, flat, and quite solid, weighing from eight to ten pounds each. Pkt. 10 cts., oz. 20 cts., ¼lb. 60 cts., lb. \$2.

BURPEE'S ALLHEAD. Heads a little larger and deeper than Early Summer. A select, uniform, sure-heading strain. About ten days later than Jersey Wakefield. Fine for winter if sown late. Pkt. 10 cts., oz. 20 cts., ¼lb. 60 cts., lb. \$2.

SUCCESSION. A second-early drumhead variety which is a sure header under all conditions and at all seasons. A little later than Allhead but considerably larger. Pkt. 10 cts., oz. 25 cts., ¼lb. 75 cts., lb. \$2.50.

PREMIUM FLAT DUTCH. One of the best winter Cabbages for the home-garden or market. A heavy yielder, producing large, heavy, flat heads which keep well until late in winter. Pkt. 10 cts., oz. 20 cts., ¼lb. 60 cts., lb. \$2.

LARGE LATE DRUMHEAD. Very late but makes the largest heads of all. Heavy, solid, and a splendid keeper. Pkt. 10 cts., oz. 20 cts., ¼lb. 60 cts., lb. \$2.

HOLLANDER, or Short-Stem Danish Ballhead. Introduced from Denmark some thirty-five years ago, this Cabbage soon became and still remains the most popular and profitable variety for late market. The heads are of only medium size but round, deep, and solid as a bullet, exceeding all others in keeping quality. On strong lands it produces large tonnages and commands a good price even when other Cabbages are not salable at any price. Not recommended for poor soil. Pkt. 10 cts., oz. 25 cts., ¼lb. 75 cts., lb. \$2.50.

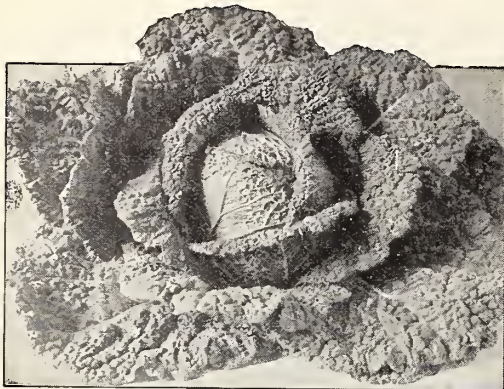
RED CABBAGE

DANISH ROUND RED. A superior strain of Red Cabbage with very hard, perfectly round heads in which the deep color extends clear to the center. Fine for pickling and probably the best of the Red Cabbages, particularly on good soils. Pkt. 10c., oz. 40c., ¼lb. \$1, lb. \$3.50.

MAMMOTH ROCK RED. Heads flattened and very large. A reliable and popular Red Cabbage, well known with market growers. Pkt. 10 cts., oz. 25 cts., ¼lb. 75 cts., lb. \$2.50.

SAVOY CABBAGE

AMERICAN DRUMHEAD SAVOY. The Savoy Cabbages have peculiarly crinkled leaves. Many gardeners grow no other kind for they are considered to excel all other Cabbages in flavor. American Drumhead is undoubtedly the best of the Savoys for all ordinary purposes. It is vigorous and hardy, with large, solid heads and few outer leaves. Generally grown as a late Cabbage as the flavor is enhanced by frost. Pkt. 10 cts., oz. 25 cts., ¼lb. 75 cts., lb. \$2.50. (See illustration on page 10.)



American Drumhead Savoy Cabbage

in every garden. Always recognized as wholesome adjuncts to the diet, they have recently been found to be especially rich in the important vitamins, while no one who has eaten freshly pulled, tender, young Carrots will deny that they make one of the most delicious dishes the garden can supply.

The best crops are grown on soils that were well manured the previous season but good results can be obtained on any good garden soil, providing it is dug deeply and thoroughly pulverized. Freshly manured ground is to be avoided for it will produce split and misshapen roots. Sow the seed any time after the frost is out of the ground, in shallow drills 15 to 20 inches apart, covering it about an inch deep and pressing the soil down firmly over the seed.

When the seedlings are well up, thin them out, leaving them standing about 2 inches apart in the rows. Later on as they begin to reach the edible stage, they may be thinned again, so as to leave at least 4 inches between plants which are to remain until they attain full size. To insure a constant supply, make sowings every three or four weeks from late March to the end of June. Early June is a good time to sow the main crop for roots to be stored like beets for winter use.

An ounce of seed will sow about 100 feet of drill; 3 to 4 pounds are required to sow an acre

EARLY SCARLET HORN, BLUNT ROOT. A quick-growing variety which makes thick, blunt-ended roots about 3 inches long, deep reddish orange in color, and of excellent quality. A fine Carrot for early use and for forcing in frames. Tops small. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. \$1.

EARLY SCARLET HORN, POINTED ROOT. Like the preceding, except that the root is a little longer and tapers down to a point. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. \$1.

DANVERS HALF-LONG. The most popular Carrot for the main crop, being a reliable, heavy-yielding variety of excellent quality and attractive appearance. The roots are smooth, nearly cylindrical, bluntly pointed, and in good soil will attain a length of 6 to 8 inches. The skin and flesh are bright orange-red, fine-grained and tender. Market-gardeners find it an ideal variety for bunching and it is a splendid winter keeper. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. \$1.

CHANTENAY. Grows more quickly than Danvers and the roots are shorter but broader at the top, tapering to an abrupt point. It produces heavy yields on comparatively shallow soils. Chantenay is largely grown by market-gardeners and is a splendid main-crop Carrot for the home-garden. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. \$1.

HALF-LONG LUC. A French variety of the Danvers type, noted for its superior quality. It is a little earlier than Danvers, not quite so long and more nearly cylindrical, remarkably smooth and uniform in shape and size. The flesh is deep in color, very sweet and tender, and almost entirely free from core. Not so hardy as other main-crop Carrots but will produce big crops on well-prepared soil. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. \$1.

ST. VALERY. A medium-long, tapering or pointed Carrot of fine quality; the most desirable of the pointed Carrots for home-garden and critical markets. The roots grow about 10 inches long



Danvers Half-Long Carrots

color, and very attractive in appearance. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. \$1.

IMPROVED LONG ORANGE. A fine strain of the pointed type, producing large, tapering roots, 12 to 14 inches long, smooth, bright orange in color and of good quality. On deep, mellow soils it will yield enormous crops. Besides being an excellent table Carrot, it is much planted for feeding to stock. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. \$1.

All seeds postpaid except Peas, Corn and Beans, to which add 8 cts. per pint, 10 cts. per quart to cover postage.

CHINESE or CELERY CABBAGE

PE-TSAI. Produces heads which resemble giant cos lettuce, often 2 feet high and 6 inches or more in diameter. It develops best in the fall. Sow the seed the last of June or early in July, in shallow drills about 2 feet apart, and thin or transplant the seedlings to stand about 15 inches apart. The outer leaves may be used as a salad while the plants are growing and the heads, which are quite solid and beautifully blanched within, have a delicious flavor either as a salad or cooked like asparagus. Gardeners who have not yet tried this fine, easily grown vegetable should plan to sow a few rows of it this summer. It can be grown in the rows left vacant after the early spring crops have been harvested. Pkt. 10 cts., oz. 30 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.50.

Pe-Tsai
Chinese
Cabbage

CARROTS

A little more particular as to soil than beets, but otherwise just as easy to grow, Carrots deserve a place

in every garden. Always recognized as wholesome adjuncts to the diet, they have recently been found to be especially rich in the important vitamins, while no one who has eaten freshly pulled, tender, young Carrots will deny that they make one of the most delicious dishes the garden can supply.

The best crops are grown on soils that were well manured the previous season but good results can be obtained on any good garden soil, providing it is dug deeply and thoroughly pulverized. Freshly manured ground is to be avoided for it will produce split and misshapen roots. Sow the seed any time after the frost is out of the ground, in shallow drills 15 to 20 inches apart, covering it about an inch deep and pressing the soil down firmly over the seed.

When the seedlings are well up, thin them out, leaving them standing about 2 inches apart in the rows. Later on as they begin to reach the edible stage, they may be thinned again, so as to leave at least 4 inches between plants which are to remain until they attain full size. To insure a constant supply, make sowings every three or four weeks from late March to the end of June. Early June is a good time to sow the main crop for roots to be stored like beets for winter use.

An ounce of seed will sow about 100 feet of drill; 3 to 4 pounds are required to sow an acre

EARLY SCARLET HORN, BLUNT ROOT. A quick-growing variety which makes thick, blunt-ended roots about 3 inches long, deep reddish orange in color, and of excellent quality. A fine Carrot for early use and for forcing in frames. Tops small. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. \$1.

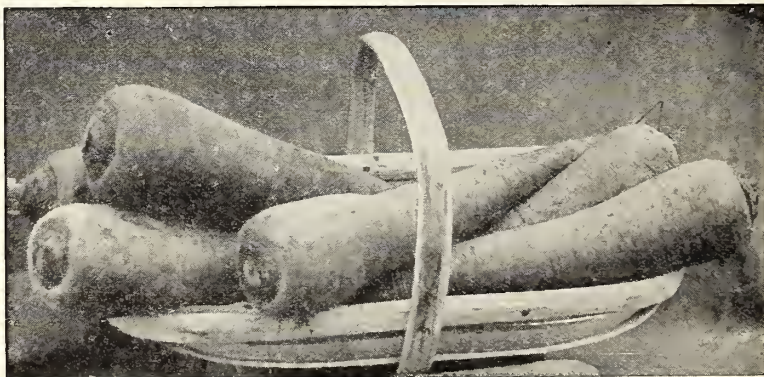
EARLY SCARLET HORN, POINTED ROOT. Like the preceding, except that the root is a little longer and tapers down to a point. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. \$1.

DANVERS HALF-LONG. The most popular Carrot for the main crop, being a reliable, heavy-yielding variety of excellent quality and attractive appearance. The roots are smooth, nearly cylindrical, bluntly pointed, and in good soil will attain a length of 6 to 8 inches. The skin and flesh are bright orange-red, fine-grained and tender. Market-gardeners find it an ideal variety for bunching and it is a splendid winter keeper. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. \$1.

CHANTENAY. Grows more quickly than Danvers and the roots are shorter but broader at the top, tapering to an abrupt point. It produces heavy yields on comparatively shallow soils. Chantenay is largely grown by market-gardeners and is a splendid main-crop Carrot for the home-garden. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. \$1.

HALF-LONG LUC. A French variety of the Danvers type, noted for its superior quality. It is a little earlier than Danvers, not quite so long and more nearly cylindrical, remarkably smooth and uniform in shape and size. The flesh is deep in color, very sweet and tender, and almost entirely free from core. Not so hardy as other main-crop Carrots but will produce big crops on well-prepared soil. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. \$1.

ST. VALERY. A medium-long, tapering or pointed Carrot of fine quality; the most desirable of the pointed Carrots for home-garden and critical markets. The roots grow about 10 inches long



Improved Long Orange

CELERY

Celery is an aristocrat among the garden vegetables—one of the crops the real gardener boasts about. Yet, it is by no means so hard to grow as many people think. And home-grown Celery is certainly worth a lot of trouble. In the first place, Celery wants plenty of fertilizer—enrich the spot where you are going to grow it with manure, humus, or rich compost, or if you lack these, with a commercial fertilizer high in nitrogen. On heavy clays, manure or humus is particularly needful. Celery seed is rather slow and irregular in sprouting. For early crops sow indoors or in a hotbed about March 1, barely covering the seed with soil. When the seedlings are 2 to 3 inches high, thin them out or transplant them 1½ to 2 inches apart. "Harden" them by exposing to the air more and more as the season progresses and by the end of May they should be ready to go out in the garden. For winter Celery, sow seed in a coldframe or sheltered spot in the garden about mid-April and reset in the trenches about July 1. It is a good plan to cut off the tops of the plants when they are 4 or 5 inches high to make them more stocky.

When ready to transplant to the garden, dig the soil deeply, pulverize it thoroughly, and then make trenches about 6 inches deep and 6 inches wide at the bottom, spacing them 3 to 5 feet apart. Set the plants 6 to 8 inches apart in the bottom of the trenches, firming the soil about them. Do not work around the plants or permit dirt to get on the leaves when they are wet. Commencing when the plants are about half-grown, fill in the trenches and pull dirt up around them gradually, until finally all but the top leaves are covered, but be careful not to let dirt get into the heart. This process not only blanches the stalks and heart but brings out the rich Celery flavor. The same result may be secured by the use of paper Celery bleachers or by placing boards, 10 to 12 inches wide, against the plants on either side. For winter use store in the cellar or leave banked up in the trenches, cover with straw or loose litter to prevent freezing and with boards on top to keep out rain.

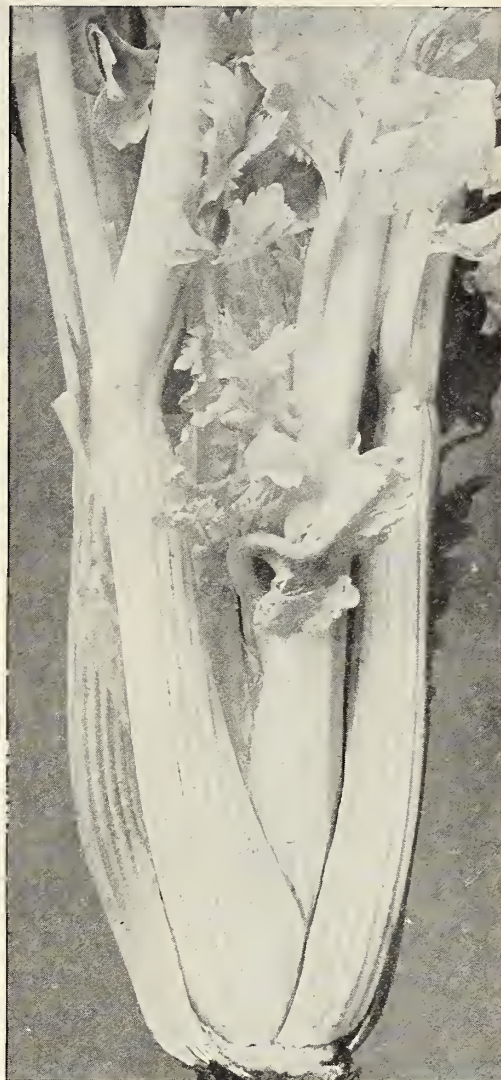
An ounce of seed will produce 3,000 plants; one-half pound is required for an acre

EASY BLANCHING. An ideal Celery for the home-garden and a leading variety for market, combining hardiness, early maturity, and good keeping quality with ease of blanching and fine flavor. The stalks are of medium height, thick through, and brittle; the heart is heavy, blanching quickly to a clear light yellow. Less liable to blight than other sorts, and good for both early and late crop. Pkt. 10 cts., oz. 35 cts., ¼lb. \$1, lb. \$3.

GOLDEN SELF-BLANCHING. One of the finest early Celeries in cultivation; a favorite for early market. It is rather low and compact in growth, with thick, round stalks and heavy heart, blanching easily to a rich golden yellow. In flavor and quality it is unsurpassed. Our stock was grown in America from a superior strain of French grown seed. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.50, lb. \$5.

GOLDEN PLUME, or WONDERFUL. A new Celery, resembling Golden Self-Blanching in crispness and flavor, but much larger and ranker in growth, blanches quicker and matures earlier. It is also more blight-resistant than Golden Self-Blanching. Equally good for the market and home gardeners. Pkt. 15 cts., oz. \$1.25, ¼lb. \$4, lb. \$15.

WHITE PLUME. A very early, easily grown variety with tall, handsome stalks which blanch quickly to a silvery white. A favorite. Pkt. 10 cts., oz. 35 cts., ¼lb. \$1, lb. \$3.



Easy Blanching Celery



Celериac

GOLDEN DWARF. Somewhat similar to Golden Self-blanching but more dwarf in growth; thick stalks, very solid and of fine quality, blanching to golden yellow. Pkt. 10 cts., oz. 35 cts., ¼lb. \$1, lb. \$3.

GIANT GOLDEN HEART. Rather tall, forming a large bunch, and a good keeper; otherwise similar to Golden Dwarf. Pkt. 10c., oz. 35c., ¼lb. \$1, lb. \$3.

GIANT PASCAL. A fine, late Celery with broad, thick, heavy stalks of superb nutty flavor; blanches yellowish white. A good winter keeper, retaining its flavor and crispness in storage; popular for market. Pkt. 10 cts., oz. 35 cts., ¼lb. \$1, lb. \$3.

PERFECTION HEARTWELL. One of the largest and best of the winter Celeries, of excellent quality and a splendid keeper. Stalks large and thick; heart heavy and deep yellow in color. Pkt. 10c., oz. 35c., ¼lb. \$1, lb. \$3.

WINTER QUEEN. Another late sort of strong, compact growth; solid and excels in keeping quality. Medium in height with thick, brittle stalks. Pkt. 10 cts., oz. 35 cts., ¼lb. \$1, lb. \$3.

CELERIAC, or TURNIP-ROOTED CELERY

The roots—not the stalks—are the edible portion of this plant. They are used for flavoring soups and in stews, in place of Celery or celery seed, and are also cooked or used as a salad. Grown like Celery but does not require blanching.

LARGE PRAGUE. A productive variety with large, round, smooth roots, free from side shoots. Pkt. 10 cts., oz. 35 cts., ¼lb. \$1, lb. \$3.



Golden Bantam Sweet Corn

Add 8 cts. per pint, 10 cts.
per quart to cover postage

SWEET CORN

One quart of seed will plant 200 to 300 hills or 300 feet of row; 6 to 8 quarts will plant an acre

The one vegetable which every American gardener wants to grow is Sweet Corn, and, fortunately, it is one of the easiest to grow thriving on most all soils and requiring only a minimum of attention. Since the seed is rather tender, do not make the first sowing until the soil is warm and comparatively dry—the middle of May is usually the earliest it is safe to sow Corn in this section. It can be grown in hills or in rows, the latter method being usually preferred. Hills are placed 2 to 3 feet apart each way, dropping about six seeds in each hill and, when the plants are about 8 inches high, pulling out all but the three or four strongest. Rows are spaced $2\frac{1}{2}$ to $3\frac{1}{2}$ feet apart and the plants thinned to stand 12 to 15 inches apart in the rows. Generally speaking, the late varieties grow larger and require more room than the early sorts. In planting, cover the seed about 2 inches deep, or a little deeper if the weather is very dry. Growing Corn requires lots of water. To preserve all the moisture in the soil and, incidentally, keep down weeds, hoe or cultivate frequently, taking care, however, not to go too deep as Corn roots spread out close to the surface. In order that the ears may develop perfectly they must receive plenty of pollen from nearby stalks; consequently, it is always best to plant Sweet Corn in several short rows, side by side, rather than in one or two long rows. Many gardeners plant only one or two quick-maturing varieties, securing a continuous supply by making sowings every ten days or two weeks from mid-May to early July. Others follow the plan of sowing, all at one time, a number of sorts which will mature in succession. If you want to enjoy Sweet Corn far sweeter and richer than any you have ever been able to buy, grow it yourself and pick it just before it is to be cooked.

DELUE'S GOLDEN GIANT. Undoubtedly the finest Sweet Corn now in cultivation! The result of sixteen years of rigorous scientific breeding, it is as sweet, tender, and rich in flavor as the famous Golden Bantam, practically as early, more productive, and much larger. It is a vigorous grower, bearing handsome 12-rowed ears 8 inches long and filled to the tip with broad yellow kernels. An ideal Corn for the home-garden and a profitable sort to grow for market. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

GOLDEN BANTAM. For many years Golden Bantam has represented the very acme of Corn quality, and its delicious little golden yellow ears are known wherever Sweet Corn is grown. It is one of the quickest to mature its crop, and, since the seed is hardy and can be planted a week or so earlier than other sorts, it can always be depended upon to supply the first true Sweet Corn of the season. The stalks are rather dwarf in growth but extremely vigorous and usually bear two ears which are 5 to 6 inches long and uniformly 8-rowed, with broad, creamy yellow kernels. A great favorite in the home-garden and always in demand on the market. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

BARDEN'S WONDER BANTAM. Introduced last year. A wonderful success. Large yellow deep grains. Ears a third larger than Golden Bantam, often 8 to 10 inches long. Stalks 5 to 6 ft. high. Just as early as Bantam and equal if not superior in quality. $\frac{1}{2}$ pt. 20 cts., pt. 30 cts., qt. 50 cts., pk. \$2.50, bus. \$9.

GOLDEN EVERGREEN. A fine, large-eared, deep-grained yellow Sweet Corn, produced by crossing Golden Bantam and Stowell's Evergreen. A midseason Corn that remains tender and sweet for a long time after it reaches full size. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

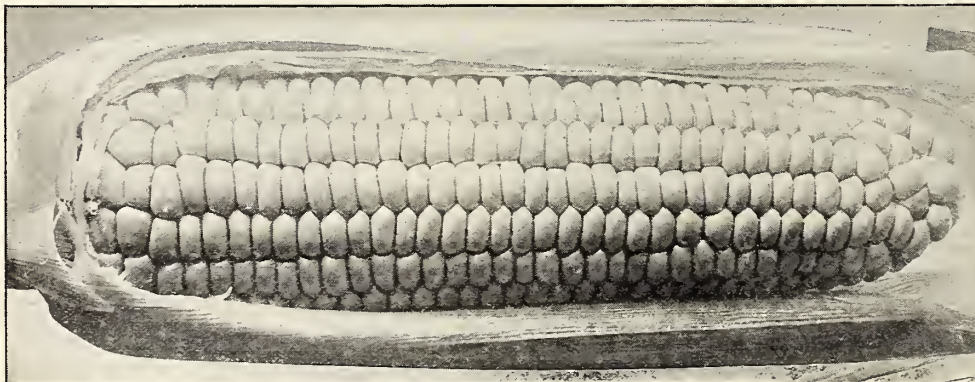
GOLDEN CREAM. The result of a cross between Golden Bantam and Country Gentleman. It is about the same size as Bantam but later, and has the irregular or "shoe-peg" kernels of Country Gentleman. Deep creamy yellow; extra-fine quality. $\frac{1}{2}$ pt. 15c., pt. 25c., qt. 40c., pk. \$2.25, bus. \$8.

EARLY MAYFLOWER. The earliest white Sweet Corn that produces an ear of good size and quality. Medium in growth, productive and hardy, bearing ears 7 inches long with 8 or 10 rows of broad, tender, pure white kernels. Fine for first early. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$2.50, bus. \$9.

EARLY CORY. An old standby for first crop. A few days later than Mayflower; hardy; ears 6 to 7 inches long and 8-rowed. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2, bus. \$7.

PEEP O'DAY. Small, quick-growing variety, nearly as early as Mayflower and of extra-fine quality. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

EXTRA-EARLY MINNESOTA. A very hardy second-early with ears 8 inches long and 8-rowed. $\frac{1}{2}$ pt. 15c., pt. 25c., qt. 40c., pk. \$2.25, bus. \$8.



DeLue's Golden Giant Corn

PREMO. Long, slender, 8-rowed ears with short, broad grains, very sweet and tender. A little later than Peep o'Day. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

POCAHONTAS. A good second-early for market with ears of medium size and good quality. Hardy and somewhat resembles Extra-Early Minnesota. $\frac{1}{2}$ pt. 15c., pt. 25c., qt. 50c., pk. \$2.50, bus. \$9.

FORDHOOK. About a week later than Mayflower, with large 8-rowed ears. Cob small; grains broad and deep; quality fine. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$2.50, bus. \$9.

KENDEL'S EARLY GIANT. One of the most popular of the medium-early white Sweet Corns for market. Ears 8 to 9 inches long and 12-rowed, of good quality and very productive. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

HOWLING MOB. Undoubtedly the finest of the medium-early varieties, unusually large for so early a sort and not surpassed in quality by any other white Sweet Corn. It comes in about 12 days after Mayflower. The best second-early Sweet Corn for the home-garden and extensively planted for market. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

EARLY CHAMPION. Ready for use about the same time as Howling Mob; ears large, 14 or 16-rowed, well filled with large, broad grains of good quality. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

MEDIUM AND MAIN-CROP SWEET CORNS

EARLY EVERGREEN. An early selection of the old standby, Stowell's Evergreen. A vigorous, productive strain, not quite so tall but several days earlier than Stowell's, bearing large ears of typical Evergreen type and quality. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

SCOTT'S EARLY PERFECTION. Introduced by us about eighteen years ago, this variety has grown in popularity every year it has been in cultivation. As an early main-crop White Sweet Corn it has no superiors for either home or market use. It follows close after Howling Mob. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

EARLY MAMMOTH. The earliest of the so-called Mammoth varieties. Coming in with Early Evergreen, it produces heavy ears 9 inches long with very broad grains of delicious quality. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

COLUMBUS MARKET. One of the best main-crop market varieties. A shade earlier than Stowell's Evergreen, with ears 10 to 12 inches long, 14-rowed; grains pure white, large and deep, very sweet and tender. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

SHEDAKER'S CHOICE. A few days later than Adam's Early and ears much longer—from 12 to 14 inches. The ear is thick, with straight, uniform rows of grains. This Corn is slightly sweet, resembling Sugar Corn, and produces two and often three good ears to the stalk. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.75, bus. \$10.

STOWELL'S EVERGREEN. The old, reliable, ever-popular late variety. The ears are 8 to 10 inches long with 16 to 18 rows of very deep, sweet kernels. It remains tender and sweet for a long time. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

WHITE EVERGREEN. An exceptionally sturdy and productive strain of Stowell's, bearing a slightly larger, broader ear and broader, whiter grain. Of high quality and perhaps the best for canning. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

ZIG-ZAG EVERGREEN. Similar to Stowell's except that the ears are densely covered with slightly deeper and narrower kernels. Fine quality. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

LATE MAMMOTH. The largest of all Sweet Corns and one of the very finest in quality. Ears often 12 inches long, deliciously sweet. A week or ten days later than Evergreen. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

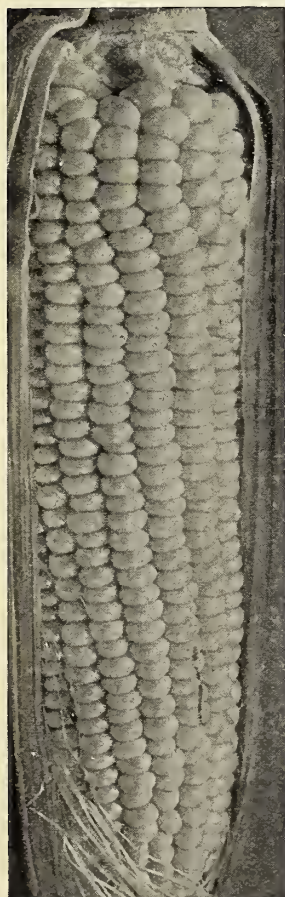
COUNTRY GENTLEMAN. The favorite main-crop Corn with many gardeners, on account of its fine rich flavor. The ears are 7 to 8 inches long with long, narrow kernels set densely and irregularly on a very small cob. Often called "Shoe-Peg." $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.25, bus. \$8.

BLACK MEXICAN. The ears are of good size with broad kernels which are bluish white when they reach the edible stage and turn violet when cooked. Not desirable for market on account of its color but its distinct flavor makes it a great favorite for the home-garden. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2.50, bus. \$9.

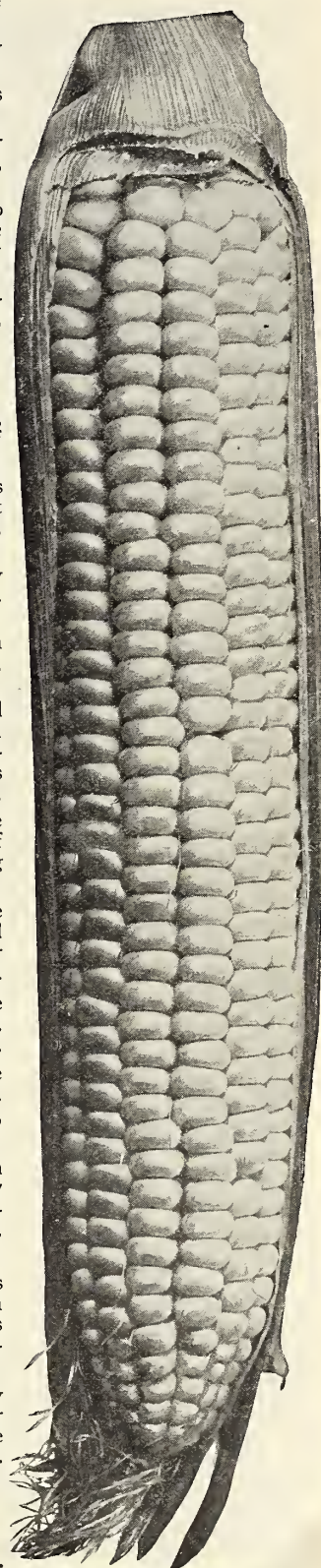
EXTRA-EARLY ADAMS. Not a true Sweet Corn but extremely hardy and early. It thrives in weather too cold and wet for other varieties, so may be planted earlier and grown in climates where true Sweet Corn does not mature. Often planted for first market. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 40 cts., pk. \$2, bus. \$7.

POP-CORN

WHITE RICE. The most popular sort for general use. Productive; popping quality excellent. Prices shelled, lb. 15 cts., 2 lbs. 25 cts. By mail, lb. 23 cts., 2 lbs. 35 cts.



Stowell's Evergreen



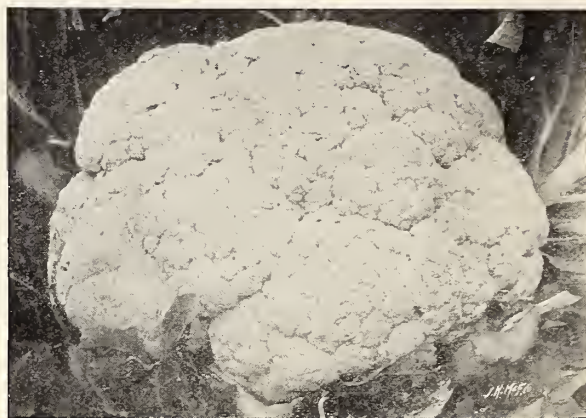
Scott's Early Perfection Sweet Corn

CAULIFLOWER

Rich soil, plenty of moisture, and cool weather at the time of heading are required to grow good Cauliflower. In this part of the country it is advisable to time the sowing so that the plants will mature either before the hot, dry days of midsummer or in the fall. Sow the seed and treat the young plants exactly as you would cabbage, starting the spring crop in flats indoors or in the hotbed early in February and transplanting to the garden in May after danger from frost is past. Sow for fall crop in coldframe or seed-bed in May and transplant in July. When you set the plants out, space them about 1½ feet apart in rows 2 feet apart, digging in plenty of manure if it is available. When the plants show signs of heading, water them freely. Finally, when the heads are about 2 inches in diameter, tie the outer leaves loosely together over the top with a soft twine, to protect them from the sun and blanch them white.

An ounce of seed will produce about 2,000 plants

SELECT EARLY SNOWBALL. Extra-early and generally considered to be one of the surest headers. It produces deep, solid heads of medium size, pure white, and of fine quality. Being compact in growth, with small outer leaves, the plants can be set close together. Forces easily and is often grown in greenhouse or frames. Snowball is the most popular Cauliflower with the commercial growers and is for either early or late crop in the home-garden. Pkt. 40 cts., ¼oz. 75 cts., oz. \$2.50, ¼lb. \$8, lb. \$30.



Select Early Snowball Cauliflower

DANISH GIANT, or Dry Weather. A little later than Snowball and the plants are larger. Preferred in some sections because it will grow and head during dry weather. Pkt. 40 cts., ¼oz. 75 cts., oz. \$2.50, ¼lb. \$8, lb. \$30.

CUCUMBERS

A dozen or so good, strong plants on well-dug, moderately rich soil will produce all of the pickles and slicing Cucumbers the average family will want. For an extra-early crop, start indoors or in a frame about April 1, sowing the seed in paper pots or dirt-bands or on the bottom of inverted sods, and transplant to the garden the latter part of May, moving sod and all in order to disturb the roots as little as possible. Sow the main crop directly in the garden late in May, and, for a continuous supply, make additional sowings every two weeks up to the middle or latter part of July. For a special crop of pickles, sow seed about July 1. Before setting out the plants or sowing seed in the garden, prepare hills 4 to 6 feet apart, digging up the soil to a depth of a foot or more and mixing in plenty of manure or compost. Cucumber roots grow deep and are not much benefited by surface fertilizing. If the soil is stiff and heavy it will be improved by the addition of sand as well as manure. Leave the soil in the hills loose and a little higher than the general level of the garden. Sow eight to ten seeds in each hill and when the plants come up, thin out all but the strongest three or four. Do not disturb the vines after they have started to spread. Pick the fruits as fast as they become ready for use in order to keep the vines bearing for a long period. If the striped beetles interfere with the development of the young plants, give them a dose of bordeaux-arsenate of lead or tobacco dust.

An ounce of seed will plant about fifty hills; 2 pounds of seed will be required for an acre

DAVIS PERFECT. One of the best all-round Cucumbers in cultivation, for many years a favorite with home and market-gardeners alike. It is a dependable producer of very long, slender fruits which are rich dark green color and of finest quality. It is a good shipper and holds its deep green color for a long time. Well adapted for greenhouse culture; medium early. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.25.

IMPROVED EARLY WHITE SPINE. Extra early and prolific. Produces medium-sized, light green fruits of fine quality for slicing. Good for pickles also, and a popular sort for the home-garden. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.

ARLINGTON WHITE SPINE. A little larger and a little later than Improved Early White Spine; otherwise similar. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.



Improved Early White Spine Cucumber

EARLY FRAME, or Short Green. Medium early and quite productive. Fruits about 6 inches long, straight, tapering at both ends, and a little inclined to be three-cornered rather than round. Good for pickling and slicing. Pkt. 10 cts., oz. 15c., ¼lb. 40 cts., lb. \$1.

EARLY CLUSTER. Early, compact variety; short, chunky fruits in clusters at the center of the plant. Well adapted for forcing or open ground. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.

All seeds postpaid except Peas, Corn and Beans, to which add 8 cts. per pint, 10 cts. per quart to cover postage

CUCUMBERS, continued

EARLY FORTUNE. A highly bred variety of the White Spine type. The vines are vigorous, producing big crops of handsome, long, slender fruits, deep green in color and exceedingly uniform in size and shape, with crisp, firm flesh and few seeds. Early, fine for slicing and one of the best for market. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

EXTRA-LONG, or Evergreen White Spine. A selection from the standard White Spine type, producing fruits 10 to 12 inches long, dark green in color, smooth, and of splendid quality for slicing. Good for late crop and for greenhouse forcing. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

BENNETT'S WHITE SPINE, IMPROVED. A medium-early, very productive variety which bears handsome, dark green fruits, very uniform in shape and size, about 8 inches long, thick through and blunt ended. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

COOL AND CRISP. An early strain of the White Spine type. Fruits about 8 inches long, thick at the middle but tapering off at the ends; light green in color; quality good. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

KLONDIKE. A medium-early strain of White Spine Cucumber, notable chiefly for its unusually dark green color which it holds for a long time even under the hottest sun. Fruits of good size and shape. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

FORDHOOK FAMOUS. An exceptionally vigorous sort, bearing for a long season. The fruits are of giant size, often 15 inches long, thick through and slightly tapered at the ends, dark green in color and with crisp, solid flesh and few seeds. An ideal home-garden salad Cucumber. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

CUMBERLAND. Bears medium-sized, straight, blunt-ended fruits thickly set with small spines from end to end. Flesh firm with few seeds, fine for slicing. Prolific. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

LONG GREEN TURKEY. One of the best for pickles and useful for slicing as well. Late but very productive. The fruits when full grown are 14 to 16 inches long, straight and slender, slightly warty, dark green with crisp white flesh. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.



Davis Perfect Cucumbers

EXTRA-LONG JERSEY PICKLING. Extensively grown for large pickles. The fruits are slender and tapering, growing 6 inches long, medium green in color. Extremely prolific. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

GREEN PROLIFIC, or Boston Pickling. For small pickles. Produces short, thick, bright green fruits, smooth and symmetrical. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

EVERBEARING. Quite similar to Early Frame, but later, more prolific, and bears for a longer season. Largely grown for pickles. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

LIVINGSTON'S EMERALD. Fruits of good size, remarkably smooth and free from spines, and bright green in color. The vines are vigorous, commencing to bear when quite small. Excellent for small pickles and the ripe fruits make fine sweet pickles. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

JAPANESE CLIMBING. A good Cucumber for the small garden as the vines can be trained on fence or trellis; in fact, it requires some sort of support. Fruits long and thick, crisp, tender and of fine quality. If kept picked the vines will bear freely all season. Pkt. 10 cts., oz. 20c., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

WEST INDIA GHERKIN, or Bur. Used for pickles. The vines are luxuriant, bearing quantities of small, nearly round fruits, light green and covered with spines. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 60 cts., lb. \$2.



Witloof Chicory

CHICORY

The large-rooted variety is grown for its roots, which may be cooked and served like turnips and they are sometimes dried and used to adulterate coffee. The Witloof variety is highly esteemed as a winter salad, for which purpose the plants are taken up in the fall, cut back nearly to the top of the root, and then covered with soil in a box or trench in a warm cellar. The new leaves, which grow from the old roots in about a month's time, are nearly white, crisp, and of a fine, piquant flavor. Sow Chicory seed in April or May, in shallow drills, and thin the plants to stand 4 to 6 inches apart.

An ounce will sow about 100 feet of drill

LARGE-ROOTED. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

WITLOOF. Sometimes called French Endive. Pkt. 10c., oz. 20c., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

COLLARDS

GEORGIA, or Southern. Largely grown for "greens" in the southern states. Produces a large cluster of tender leaves at the top of its long stem. Sow late in the spring and give the plants plenty of room to develop. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

CORN SALAD

A hardy, quick-growing plant, popular as a substitute for lettuce in late fall and early winter. Sow the seed early in the fall, in shallow drills, and give plenty of water. Late plants, covered with a light mulch of straw or leaves, will be suitable for use in early spring. *An ounce of seed sows about 100 feet of drill.*

LARGE-SEEDED. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

CRESS (For peppery salads and garnishes)

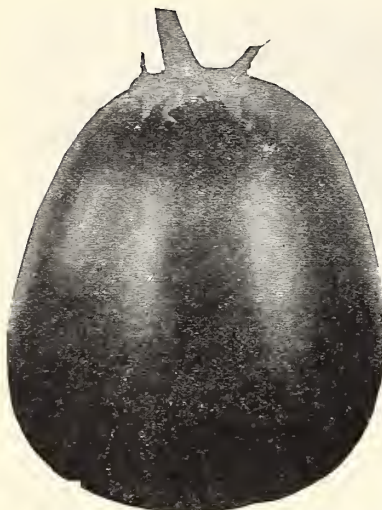
FINE-CURLED PEPPER GRASS. Sow the seed any time from early spring on. It need not be grown in rows and requires no thinning. The leaves can be cut several times before the plants begin to form seed. Make sowings every week or ten days, a small patch at a time, for a continuous supply. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

WATER CRESS. (True.) Grows in damp places. Sow the seed in shallow water along the bank of a stream. No further care is required after sowing. Pkt. 15 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

DANDELION

The cultivated form is much larger and heavier than the common wild Dandelion. If the leaves are tied together, the center of the plant will blanch as white and clear as endive. Sow the seed early, in shallow drills, in rich soil, and thin the plants to stand about 1 foot apart. Cultivate frequently and keep out weeds. *An ounce of seed will sow about 100 feet of drill.*

IMPROVED FRENCH. Pkt. 15c., oz. 60c., $\frac{1}{4}$ lb. \$2, lb. \$7.



New York Improved Eggplant

EGGPLANT

*An ounce of seed will produce
about 1,000 plants*

Eggplant is a warmth-loving vegetable, growing best in a light, mellow, well-enriched soil. Since it requires a long growing season and plenty of heat at the time the fruits are developing, it is necessary to start the seed in March, in hotbeds or boxes indoors. Push the seedlings along with plenty of light, heat, and moisture, and when they are about 3 inches high, transplant them to 3- or 4-inch paper pots or dirt-bands. Early in May, commence to "harden" the plants gradually, by exposing them to the air on warm days, but protect them carefully from chills and drafts at all times. Set them out in the garden about June 1, spacing them 2 to 2½ feet apart each way. Disturb the roots as little as possible in transplanting, and water freely.

NEW YORK IMPROVED SPINELESS. A very productive sort, bearing large, smooth, dark purple fruits of good size and quality, six to eight fruits to the plant. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.50, lb. \$5.

BLACK BEAUTY. A favorite in home-gardens; a week to ten days earlier than the preceding. Fruits are of enormous size, smooth, purplish black in color and of fine quality. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.50, lb. \$5.

ENDIVE

*An ounce of seed will sow 150 feet of row;
3 pounds will sow an acre*

An appetizing and healthful salad which is grown principally for fall and early winter use, as the plants are hardy and develop perfectly in cool weather. Sow the seed any time from early April to the end of July, the best results being usually obtained from late June or early July sowings. Plant in shallow drills about 15 inches apart and

thin the plants to stand 10 to 12 inches apart in the rows. When full grown, tie the tips of the outer leaves together over the center of the plant (when the leaves are dry), to blanch the heart, which will take about a week's time.

GREEN CURLED. The hardiest and most vigorous kind. The plants are large and handsome, with finely cut and fringed, dark green leaves. The heart blanches easily to clear white. Quality fine. Pkt. 10 cts., oz. 15 cts., ¼lb. 50 cts., lb. \$1.50.

WHITE CURLED. Foliage is a little finer than the Green Curled and the inner leaves become creamy white without blanching. Pkt. 10 cts., oz. 15 cts., ¼lb. 50 cts., lb. \$1.50.

BROAD-LEAVED (ESCAROLLE). The leaves are broad and quite thick and heavy, slightly twisted and scalloped. Medium green in color, blanching readily, and of good quality. Used as a winter salad and also cooked like spinach. Pkt. 10 cts., oz. 15 cts., ¼lb. 50 cts., lb. \$1.50.

KALE (Borecole)

Makes delicious "greens" for fall and early spring use. For the fall crop, sow seed in May in shallow drills and thin or transplant to stand about 2 feet apart each way. Cultivate like Cabbage. Light frosts will not injure Kale but, on the contrary, improve its flavor. For early spring use, sow in September and protect over winter.

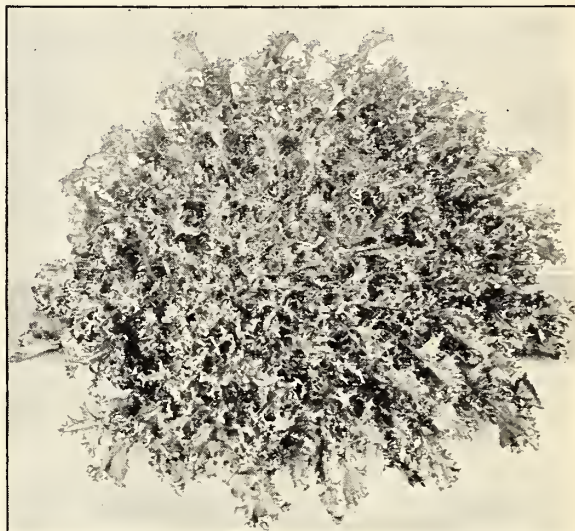
An ounce will sow about 300 feet of drill; 4 pounds will sow an acre

DWARF CURLED SCOTCH. Extremely hardy and fine for early winter use. Grows 15 to 18 inches high and produces a heavy crop of beautifully curled, bright green leaves, tender and of fine flavor. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.25.

TALL CURLED SCOTCH. Like the dwarf form but grows about 2½ feet high. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.25.

SIBERIAN. The hardiest form, especially desirable for fall sowing. The leaves are scalloped and somewhat curled but not so finely fringed as the Scotch varieties; dark green. Pkt. 10 cts., oz. 15 cts., ¼lb. 35 cts., lb. \$1.

DWARF GERMAN. Low and compact in growth, with finely curled, yellowish green leaves. Nice for garnishing. Pkt. 10 cts., oz. 15 cts., ¼lb. 35 cts., lb. \$1.



Green Curled Endive



Dwarf Curled Scotch Kale

KOHLRABI

Sometimes called Turnip-Rooted Cabbage. Sow the seed in shallow drills in April, or for extra-early crop start in the hotbed in March. Thin or transplant the plants about 6 inches apart. Kohlrabi grows rapidly and should be used when about half-grown, 2 to 2½ inches in diameter. For a continuous supply make sowings every ten days up to the middle of July.

An ounce of seed will sow about 250 feet of drill

EARLY WHITE VIENNA. The quickest growing and most popular kind for table use. Leaves few and small; bulbs of medium size with white skin and flesh, tender and of delicate flavor. Pkt. 10 cts., oz. 30 cts., ¼lb. 75 cts., lb. \$2.50.

EARLY LARGE PURPLE. A little later and larger than the White Vienna, and a reliable sort. Skin purple; flesh white. Pkt. 10c., oz. 25c., ¼lb. 75c., lb. \$2.50.

LARGE GREEN. Generally used for stock-feeding. Produces large bulbs with greenish white skin; rather tough when full grown but suitable for table use when small. Pkt. 10 cts., oz. 25 cts., ¼lb. 75 cts., lb. \$2.50.

LETTUCE

By starting seed for the first crop in the hotbed or in flats in the house in February or early March, and by carefully choosing varieties which will furnish a succession of crops in the garden, one may have fresh Lettuce for the table from May to November. Make the first sowing outdoors as soon as the ground can be put in shape, making the seed-bed as fine and mellow as possible. Scatter the seed in shallow furrows at least 15 inches apart, and cover lightly. As soon as the plants are big enough, thin them out to stand 3 to 4 inches apart. Then, when they begin to touch each other in the row, use alternate plants, leaving 8 to 12 inches, depending on variety, for the remainder to develop. Cultivate constantly. Remember that prompt thinning to provide room and frequent cultivation are the two great essentials in growing good Lettuce. An occasional sprinkling of nitrate of soda will pay in producing earlier and better crops.

The quickest and easiest Lettuces to grow are the non-heading Loose-leaf or cutting varieties. They are generally preferred for the first sowing outdoors. The Butterhead sorts are second in earliness but first in quality. They do not thrive in hot, dry weather. Use Butterhead varieties for your indoor sowing and for early spring sowing outdoors to succeed the quicker maturing Loose-leaf sorts. They may also be sown in August or early September to mature in the fall. The Crisphead Lettuces require a longer season to mature but are valuable for their comparative resistance to hot weather. Sow these to follow the Butterheads. The Cos or Romaine Lettuces are slow growers but are particularly resistant to heat and drought.

GRAND RAPIDS. An extremely early Loose-leaf variety, requiring cool weather for its proper development. It is the best variety of its class for forcing and is extensively grown in greenhouses for winter market. Also good for first spring crop in the garden. The plants are large and handsome, with bright green, curled and crinkled leaves. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

EARLY CURLED SIMPSON.

An early, medium-large Loose-leaf Lettuce with yellowish green, crumpled and frilled leaves of excellent quality. A splendid early garden Lettuce. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40c., lb. \$1.25.

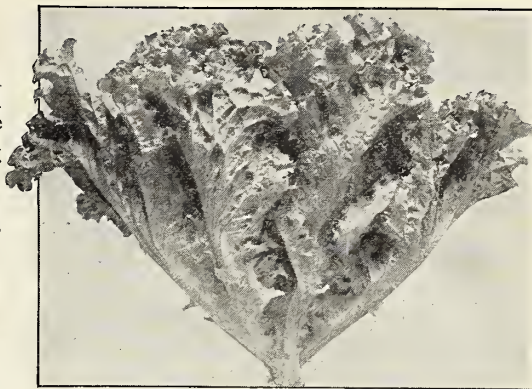
BLACK-SEEDED SIMPSON.

One of the most reliable and productive of the Loose-leaf sorts. The plants are large, with broad, beautifully crumpled and frilled leaves, light green in color and of good quality. This variety will stand more heat than others of its class and is, consequently, desirable for late sowings. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

All seed postpaid except Peas, Corn and Beans, to which add 8 cts. per pint, 10 cts. per quart to cover postage



Big Boston Lettuce. See page 18



Grand Rapids Forcing Lettuce



Iceberg Lettuce

GOLDEN CURLED. A very handsome, loose-heading Lettuce with greenish yellow, crinkled and frilled leaves. Medium size; crisp and tender. Stands warm weather well and is slow to shoot to seed. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.

BROWN CHARTIERS. Similar to the preceding but the leaves are tinged with brown. Neither Chartiers or Golden Curled are recommended for forcing. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.

CRISP-AS-ICE. A popular Lettuce of the Crisphead type which makes a solid head of medium size. Being unusually hardy, it is desirable for fall sowing. The outer leaves are dark bronzy green, crumpled and heavy in texture; inner leaves creamy yellow, crisp and sweet. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

WHITE PARIS COS, or Romaine. Distinguished by its tall, upright growth, with long, narrow leaves. The heads are compact and can be blanched to clear white by tying the outer leaves together at the top. Cos Lettuce can be grown in the hottest weather and, when properly blanched, it is crisp, tender, and of excellent flavor. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75c., lb. \$2.

ICEBERG. A fine variety for the home-garden. Crisphead type, making a very large, solid head even in warm weather. Outer leaves light green, tinged with brown at the edges; inner leaves white, crisp, firm and sweet. Stands for a long time before going to seed. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.50.

NEW YORK, or Wonderful. The most largely grown of the Crisphead Lettuces. It grows slowly but makes a fine heavy head and remains in prime condition for several weeks. The outer leaves are dark green and the inner leaves blanch to creamy white. Quality excellent. This is the variety known on the markets as "California Ice Lettuce." Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

LETTUCE, continued

MAY KING. An early Butterhead Lettuce of superb quality, and an ideal sort for early spring planting. If grown in cool weather and given ample room and cultivation, it will make very solid heads of medium size, with light green outer leaves and rich golden yellow hearts. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.

BIG BOSTON. Where conditions are favorable, Big Boston is a most dependable producer of very large, compact heads of rich buttery quality. It is a favorite with market-gardeners, particularly in the South, but will not ordinarily "head up" for the home-gardener unless it is started indoors or sown very early so as to mature before warm weather. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.

BLACK-SEEDED BIG BOSTON. Similar to the original Big Boston which is white-seeded, but a little coarser in growth and stands longer before going to seed. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.

LARGE SUMMER CABBAGE. A better warm-weather Lettuce than other Butterhead sorts. The heads are large, quite solid, medium green in color, blanching to creamy yellow in the heart, and of fine quality. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

MAMMOTH BLACK-SEEDED BUTTER. A fine outdoor Butterhead Lettuce, making a large, rather loose head of fine texture and flavor. Being quite resistant to heat and slow to seed, it is good for both early and second early crop. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.

LEEK

This relative of the Onion is grown for its thick leaf-stalks, which resemble a giant young onion. Its pungent flavor is much appreciated by many people, and it is widely used for flavoring soups and stews. A light, moderately rich soil is required for best results. Sow the seed in shallow drills early in the spring and when the plants are about 5 inches high, transplant them 6 to 8 inches apart in rows 15 inches apart, and cultivate frequently. At the time of transplanting it is a good plan to cut back the plants about a third of their height. The stalks are best when blanched by drawing earth up around them.

An ounce of seed will sow 150 feet of row; 4 pounds will produce sufficient plants for an acre

LARGE LONDON FLAG. The hardiest and most generally cultivated variety. Broad stalks of strong flavor. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 65 cts., lb. \$2.

MUSSELBURG. Grows larger and is milder in flavor than the preceding. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 65 cts., lb. \$2.

MUSKMELON

*An ounce of seed will plant about 50 hills;
2 to 3 pounds will plant an acre*

Melons grow best in a light, warm, well-enriched soil. Since they cannot be sown outdoors until warm weather, and require a long growing season, it is a good plan, in this part of the country, to start the seed in a hotbed or box indoors, using inverted sods or dirt-bands, as recommended for early cucumbers. Plant them in the garden, in hills 5 to 6 feet apart, digging the soil to a depth of a foot and mixing in plenty of manure or fertilizer with the bottom soil. In sections where the young plants are troubled with insect pests, it will be necessary to sow an excessive number of seeds with the idea of leaving enough plants to produce a crop after the bugs have done their worst. No more than three or four strong plants should be left in each hill. Hoe frequently at first, taking care not to injure the roots which run close to the surface, but do not disturb after the vines begin to spread.

EXTRA-EARLY HACKENSACK. A large, round melon, slightly flattened at the ends. The skin is ribbed and netted; the flesh is thick, light green in color, and of good quality. Matures earlier than the old type. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

HACKENSACK, or Turk's Cap. Larger and later than the preceding. Productive. An old favorite with market gardeners. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

OSAGE, or Miller's Cream. A popular market melon, unusually productive and bears for a long season; does well on soils too heavy for other varieties. The fruits are large, slightly elongated, with lightly netted dark green skin and thick, firm, orange flesh of fine flavor. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

EMERALD GEM. An early, prolific melon. The fruits are small, decidedly flattened and deeply ribbed; the skin is dark green and the flesh is unusually deep and solid, bright orange in color clear to the rind, and of remarkably fine quality. Not a good shipping melon as it remains in good condition but a short time, but a great favorite for home-gardens on light soil. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

TIP-TOP. Probably the most dependable melon for this region. Medium early and productive, bearing large, round, ribbed and netted fruits with thick, sweet orange flesh. A good market melon and does well on a variety of soils. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

ROCKY FORD. One of the finest quality melons in cultivation. The fruits are medium small, oval in shape, slightly ribbed and covered with a coarse, gray netting. Flesh green and remarkably sweet. Productive but requires a long season. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

HONEY DEW. This melon, recently introduced to American gardens, has come into great favor on account of its extraordinary sweetness. The fruits are very large, with thin, hard, smooth, pale green rind and thick green flesh which remains firm and crisp for a long time. Requires a long growing season. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.



Large London Flag Leek



Tip-top Muskmelon

All seeds postpaid except Peas, Corn and Beans, to which add 8 cts. per pint, 10 cts. per quart to cover postage

WATERMELON

If you have a sunny, sheltered spot in your garden and are willing to take pains to give the plants a good start, you can grow the finest of Watermelons, even in this northern latitude. In general, Watermelons require the same treatment as muskmelons. Start the plants in a hotbed, if possible, to save time, for they require a long growing season. It is not safe to sow seed outdoors until the last of May. Prepare the hills carefully, spacing them 8 to 10 feet apart and digging them deep, mixing in each a couple of shovelfuls of manure or, if manure is not available, a little commercial fertilizer. Humus material of some kind will have to be added if the soil is heavy. Provide in the sowing for a surplus of plants since some of them are pretty sure to succumb to the attacks of insects. To protect the seedlings as much as possible, sprinkle them with arsenate of lead powder or tobacco dust. A top-dressing of manure will keep the soil in the hill warm and moist; water freely in dry spells. When the vines begin to run, pull out all but three or four of the strongest plants.

An ounce will plant about 20 hills; 4 pounds will plant an acre

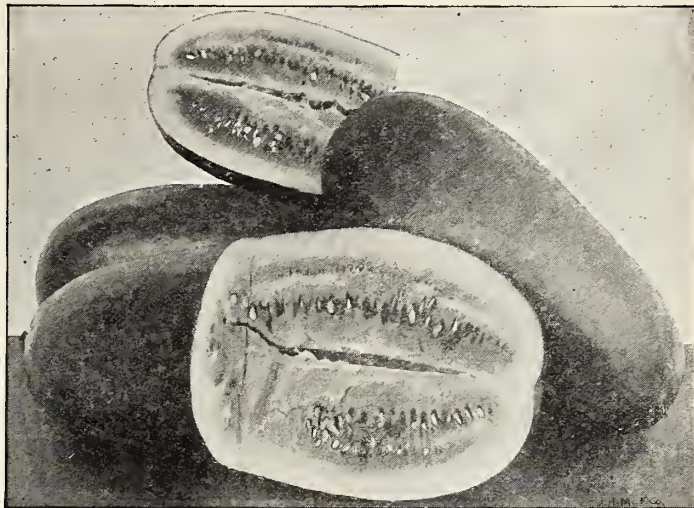
TOM WATSON. This is the most widely grown variety, the standard market melon of the South. The vines are vigorous, bearing fruits 24 inches long and about 12 inches in diameter, with a thin, tough, mottled green rind and rich red flesh of good quality. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

KLECKLEY SWEETS. Leading all other Watermelons in sweetness, this is the ideal variety for home-gardens and local markets. The fruits grow about 20 inches long and 10 inches in diameter, with thin green rind and bright scarlet flesh which is deliciously crisp and juicy without a trace of fiber or stringiness. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

SWEETHEART. Earlier than the above and, for that reason, more suitable for northern gardens. Large, heavy fruits, more nearly round than the preceding varieties, with a thick, mottled light and dark green rind and firm red flesh. Ships and keeps well; quality good. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

HORSE-RADISH

MALINER KREN. The largest and most vigorous variety. Plant in early spring in rich, moist soil. Will produce a good crop in one season. Roots, 35 cts. per doz. (postpaid 45 cts.), \$1.75 per 100 (postpaid \$2), \$10 per 1,000.



Tom Watson Watermelons

CITRON

A form of melon used only for preserving as the flesh is not edible when raw. Citrons are grown in the same way as watermelons; they are prolific and not so particular as to soil. Home-preserved Citron is much superior to that handled in the stores in a dried or candied form.

RED-SEEDED. Flesh firm, with comparatively few seeds. Fruits round and handsome. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

GREEN-SEEDED. Also called "Colorado Preserving." Fruits large and oblong. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

MUSHROOMS

Anyone who has a cellar or dark room where the temperature can be kept at from 50 to 60 degrees, can grow Mushrooms of surpassing tenderness and flavor. We furnish special printed directions free with each order, or for 50 cents we will send, postpaid, an illustrated booklet on Mushroom culture which gives the latest improved methods of growing as well as full instructions for preparing for market and recipes for cooking.

SPORE-CULTURE MUSHROOM SPAWN, NORTHERN-GROWN. Pure and vigorous. In the form of compressed bricks, each of which will plant about 8 square feet of bed. Brick, 30 cts., 10 bricks, \$2.50, 50 bricks, \$11, 100 bricks, \$20. If wanted by mail, add 10 cts. per brick to cover postage; 3 bricks, 15 cts., 5 bricks, 20c.



Mushrooms

MUSTARD

The young, tender leaves make piquant salads and are delicious as well as healthful as boiled "greens." Make frequent sowings during the spring months, commencing as soon as the ground can be prepared, in shallow drills 12 to 15 inches apart. Thin out to 10 inches between plants. Mustard can also be forced in frames or in the greenhouse during winter.

An ounce of seed will sow about 75 feet of drill

SOUTHERN GIANT CURLED. The plants grow 2 to 3 feet high, producing quantities of broad, succulent leaves which are handsomely curled and fringed. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

WHITE CHINESE. An improved form of the common White Mustard. Leaves broad and smooth, sweet and pungent in flavor. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75c.

FORDHOOK FANCY. A dark green variety of robust growth, more curled on the edges than any other sort. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.



Mustard

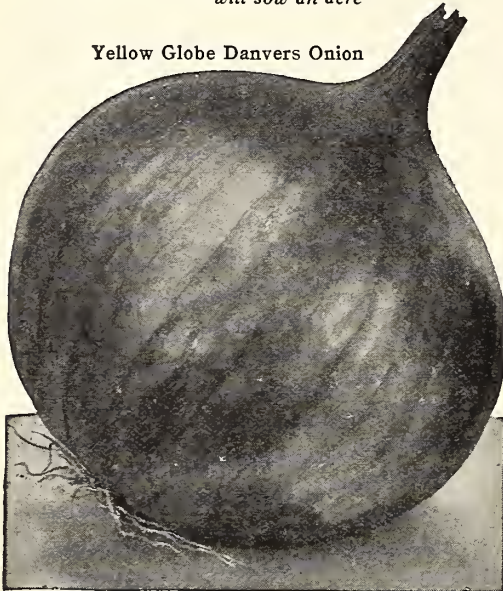
ONION

The average home-gardener is satisfied to grow small green Onions for the table. They are easily grown from seed sown in fine, well-prepared soil early in the spring. The rows should be 12 to 15 inches apart and the seed covered with a little fine soil pressed down firmly above it. When the seedlings are 3 to 4 inches high, thin them out to stand about 2 inches apart. Cultivate frequently.

Growing Large Onions from Seed. Poor or heavy soil will not grow good crops of large Onions without the addition of considerable quantities of old rotted manure, humus, and commercial fertilizer; a rich sandy loam or muck soil gives best results. If possible sow seed in hotbeds early in February, thinning the seedlings enough to prevent crowding, and transplanting to the open ground early in May, spacing them 4 to 6 inches apart, depending on variety. If hotbeds are not available, sow the seed in the garden as early as the soil can be put in shape. Thin promptly and keep the hoe or cultivator busy early and late. Keep down the weeds by frequent hand-weeding, if necessary. When the bulbs begin to ripen or show signs of going to seed in the fall, bend over the tops but do not break them off. After digging, let the bulbs thoroughly dry in the sun before storing them away.

An ounce of seed will sow about 100 feet of row; 5 to 6 pounds will sow an acre

Yellow Globe Danvers Onion



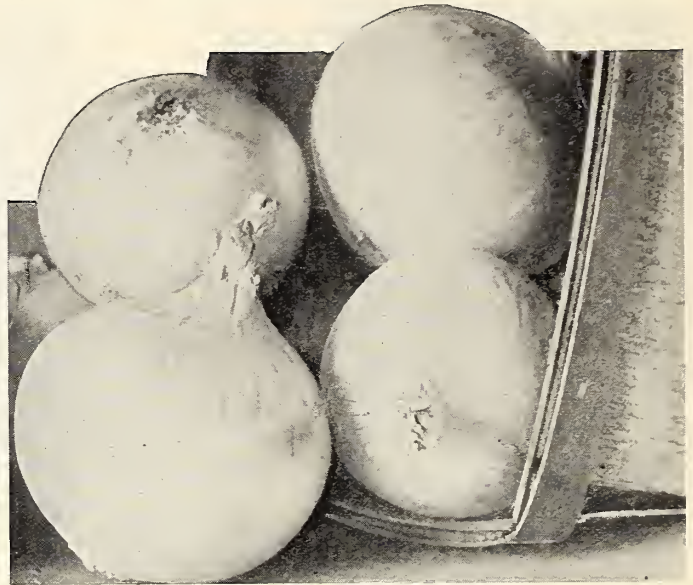
dium size and flat in shape; quality good. Largely sown to produce yellow sets. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

WHITE PORTUGAL, or Silverskin. A favorite, early, mild-flavored, pure white-skinned Onion, especially desirable for pickling. Full-grown bulbs are large and flat; not a good keeper but extra-fine in quality. If grown for young pickling Onions, sow the seed at the rate of 25 pounds per acre. Pkt. 10 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.50.

SOUTHPORT WHITE GLOBE. The largest and handsomest of the white Onions, also the best keeper. The bulbs are uniformly globe-shaped with pure white skin and fine-grained, solid flesh of sweet, mild flavor. It grows quickly to the green-Onion stage and is largely sown by market-gardeners for that purpose. Productive and reliable. Pkt. 10 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.25, lb. \$4.

WHITE BUNCHING. A very quick-growing Onion of mild flavor, fine for early spring use. Good size; skin and flesh pure white. Pkt. 10 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.50.

Growing Onions from Sets. By starting with sets, small green Onions can be produced very early and large Onions can be harvested about August 1. Plant sets as soon as the ground is ready; push them into the soil but do not cover them over, allowing 2 to 4 inches of space between, depending on whether small or large Onions are wanted. See page 21.



Southport White Globe Onions

EXTRA-EARLY RED. A flat, medium-sized Onion with purplish red skin and white flesh of good but strong flavor. The earliest of the red Onions. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

LARGE RED WETHERSFIELD. The most popular large red Onion for home-gardens and northern markets. Similar in shape and color to Extra-Early Red, but larger and about two weeks later. Productive and an excellent keeper. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

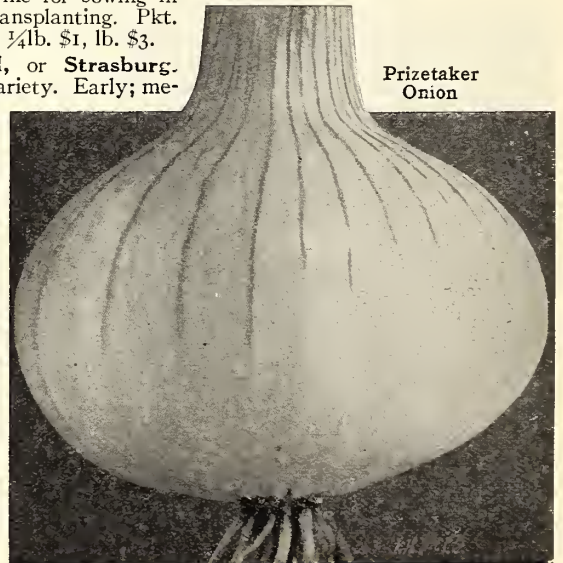
YELLOW DANVERS FLAT. Flat bulbs of good size, with thin necks, ripening down hard and keeping well. Skin is straw-yellow; flesh white, fine-grained and mild. Medium early. Pkt. 10c., oz. 35c., $\frac{1}{4}$ lb. \$1, lb. \$3.

YELLOW GLOBE DANVERS. The standard round Onion for eastern markets and probably the most popular all-purpose variety in cultivation. Productive and medium early; bulbs large, solid, nearly globe-shaped, with yellowish brown skin and pure white flesh, crisp, sweet, and mild in flavor. An excellent keeper and a very reliable Onion for home or market use. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

PRIZETAKER. A fine selection of the giant Spanish Onion, which will, if planted early and given good cultivation, produce bulbs 4 inches or more in diameter. It makes handsome, uniform, globe-shaped bulbs with thin, pale yellow skin and mild, sweet, white flesh. Prizetaker is a splendid Onion for the home-garden and a good variety to grow for fall and early winter market. Fine for sowing in the hotbed and transplanting. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

YELLOW DUTCH, or Strasburg. An old standard variety. Early; me-

Prizetaker Onion





Onion Sets

ONION SETS

We carry an extra-choice grade of Onion Sets in both white and yellow sorts. The prices are quoted below and are subject to change as a shortage is likely to develop later in the season. Ask for special quotation on large quantities.

WHITE. Qt. 30 cts., pk. \$1.75, bus. \$6.

YELLOW. Qt. 25 cts., pk. \$1.50, bus. \$5.

POTATO ONION SETS. Qt. 40 cts., pk. \$2.25, bus. \$7.

The above prices do not include postage. If wanted by mail, add 10 cts. for 1 qt., 12 cts. for 2 qts., 15 cts. for 3 qts.

ONION PLANTS

These young plants of the Prizetaker and White Bermuda Onions start into growth more quickly and grow more vigorously than dormant sets, and they make very smooth, handsome Onions of uniform size and shape, good sweet flavor, and excellent keeping quality. They are cheaper than sets, quality and yield considered, even on a small garden plot. Perfectly hardy and may be planted as early as the ground can be prepared. Place your order early, specifying which variety you want. Postpaid: 100, 50 cts.; 500, \$1.60; 1,000, \$3. Special prices on larger quantities.



Onion Plants

OKRA or GUMBO

Grown for its seed-pods, which are pickled when young, before they get tough, and used for flavoring and thickening soups. Popular in the South. Sow late in May, in drills about an inch deep and $2\frac{1}{2}$ feet apart and thin out to about 1 foot apart in the row. For an early crop, start seed in the hotbed late in March.

One ounce will sow about 25 feet of row; 20 pounds will sow an acre

LONG GREEN. A tall-growing variety which bears quantities of deep green pods that average 4 to 5 inches in length at the edible stage. Slow to ripen. Pkt. 10c., oz. 15c., $\frac{1}{4}$ lb. 25c., lb. 75c.

DWARF PROLIFIC. Early and, as the name implies, low in growth and productive. Pods of medium size; light green. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 25 cts., lb. 75 cts.

PARSLEY

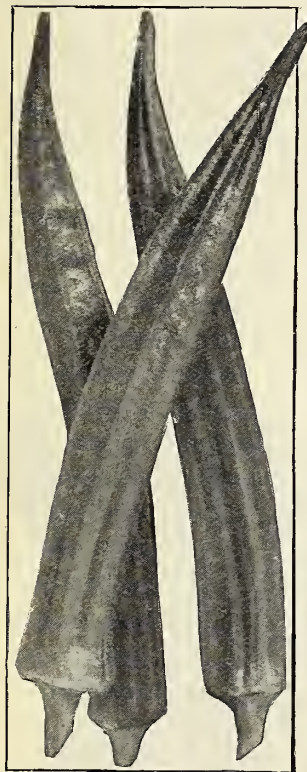
An ounce of seed will sow 150 feet of drill; 8 pounds will sow an acre

Everyone wants a little bed of Parsley for flavoring and garnishing. Choose a rich, mellow spot and sow the seed as early in the spring as possible, in drills about a foot apart and half an inch deep. The seed is very slow to germinate, sometimes requiring six to eight weeks. Soaking it in luke-warm water for a few hours before sowing will help to hasten it. When the plants are strong enough, thin them to stand about 4 inches apart. Parsley beds may be carried over winter in a frame or by mulching with leaves or straw.

DOUBLE-CURLED. A compact-growing variety with bright deep green leaves that are beautifully curled and fringed. The most attractive Parsley for garnishing. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 75 cts.

CHAMPION MOSS CURLED. A hardy and vigorous sort that can be cut the year around. Leaves attractively crimped and curled. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 75 cts.

PLAIN, or Single. The leaves are deeply cut but not curled. Much stronger in flavor than the curled sorts and, on this account, preferred for soups, etc. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 75 cts.



Long Green Okra

HAMBURG TURNIP-ROOTED. Grown for its roots, which resemble short, thick parsnips and are highly flavored; useful in soups and stews. Grown like carrots. The roots can be stored for winter use. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

PARSNIP

An ounce of seed will sow 150 feet of row; 8 pounds will sow an acre

A deep, fine but not necessarily rich soil is best for Parsnips. Spade it deep and pulverize it well, as early as the ground can be worked. Sow the seed in drills $1\frac{1}{2}$ feet apart and half an inch deep, and when the plants are well up thin them out to stand about 6 inches apart. Cultivate frequently. The roots mature in the fall and, being perfectly hardy, may be left in the ground all winter, to be dug as needed. Their flavor is improved by freezing.

HOLLOW CROWN. A standard table variety, producing long, smooth roots with white skin and fine-grained flesh. Productive and reliable. Pkt. 10c., oz. 15c., $\frac{1}{4}$ lb. 35c., lb. 75c.

GUERNSEY. Thicker at the top and not quite so long as the preceding; consequently, a better variety to grow on shallow soils. Good quality. Pkt. 10c., oz. 15c., $\frac{1}{4}$ lb. 35c., lb. 75c.

MALTESE HALF-LONG. An early variety of particularly fine quality. Roots rather short and thick. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 75 cts.

WHITE LISBON. The largest and most handsome variety. Resembles Hollow Crown but the roots are smoother and whiter. Fine quality. Pkt. 10c., oz. 15c., $\frac{1}{4}$ lb. 35c., lb. 75c.



Hollow Crown Parsnips

GARDEN PEAS

INOCULATE THIS
SEED WITH
FARMOGERM

Peas can be sown very early in the spring, the hardy round-seeded varieties even as early as March 1, and, generally speaking, the earlier you start your Peas the better, for the best crops are always obtained before the onset of real hot weather. For the first sowings use the smooth or round-seeded sorts, but after the first of April change to the wrinkled kinds which, although not so hardy, are much superior in quality. Make additional sowings every two weeks up to July 1 for a continuous supply all summer, but arrange to put the May and June plantings on deep, rich soil where you can conveniently water them during dry weather.

A good way to grow Peas in the garden is to plant them in double rows 6 to 8 inches apart, with sufficient space between each pair of double rows to allow for easy cultivating and picking. In the field, Peas are grown in single rows with 3 feet or more between. The seed should be covered about 2 inches deep, or somewhat deeper in warm, dry weather.

The dwarf varieties require no support, but the tall sorts should be provided with bush or wire to support the vines. Generally speaking, the tall varieties are more productive and retain their quality longer, although there are exceptions to this rule.

A quart of seed will sow 100 feet of single row; 1 to 1½ bushels will sow an acre

HARDY ROUND-SEEDED PEAS

CARTER'S EIGHT WEEKS. The earliest and one of the hardiest Peas in cultivation, this comparatively new variety is rapidly becoming a favorite for the first spring crop. The vines are vigorous and extremely productive, growing about 16 to 18 inches high and bearing pods of very good size for so early a sort. Peas large and of fine quality when young. ½pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

MARKET SURPRISE. An unusually large-podded, extra-early sort, growing 2½ to 3 feet tall. It is about the same season as Alaska, being several days later than Eight Weeks, but the pods are larger and Peas of better quality. A reliable variety for both home and market-gardens. ½pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3, bus. \$11.

ALASKA. A very productive smooth Pea, long in favor with market gardeners and canners. About 2½ feet tall; pods rather small, ripening all at once; Peas small and of medium quality. ½pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3, bus. \$11.

FIRST AND BEST. An old reliable. A day or two later than Alaska; similar in height, but pods and Peas are somewhat larger. ½pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3, bus. \$11.

PEDIGREE EXTRA-EARLY. An extra-select strain of First and Best, more uniform in growth and better in quality. ½pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3, bus. \$11.

PROLIFIC EARLY MARKET. Taller growing, later and more productive than Pedigree Extra-Early. The pods are quite large, averaging 3½ inches long, well filled

Alderman Peas

with Peas of good quality. ½pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3, bus. \$11.

EARLY WRINKLED PEAS

PIONEER. A very productive and reliable dwarf Pea, one of the earliest of the wrinkled kinds. The vines grow about 16 inches tall, bearing very large, curved pods, medium green in color and filled with large Peas of fine quality. ½pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

LAXTONIAN. The acknowledged leader in quality among early dwarf Peas and one of the best varieties for the home-garden. Of the same general type as Pioneer but a trifle taller and the pods and Peas are darker green. ½pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

WORLD'S RECORD. The earliest wrinkled Pea, and one of the most popular varieties for both market and home plantings in this section. It closely resembles the old standard Gradus; in fact, might be called an extra-select strain of that variety, but is a few days earlier and the pods are a shade smaller. ½pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

GRADUS. A grand old standby, second only to World's Record in earliness and a most dependable producer under all conditions and for all purposes. Vines 3 feet high; pods about 4 inches long, broad and slightly curved, containing 7 to 9 Peas of excellent quality. ½pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

EXTRA-EARLY TELEPHONE. A good strain of the Gradus type, popular with market-gardeners. ½pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

THOMAS LAXTON. As early as Gradus and grows to the same height. The pods are a little shorter and more blunt but they are always crammed full of large, tender Peas of most superb quality. Desirable for the market-garden. ½pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

LITTLE MARVEL. A very dwarf, large-podded variety which comes into bearing after Gradus and just before Laxtonian. The vines grow about a foot high and bear big crops of ¾-inch pods, containing large Peas of excellent flavor. A good Pea to plant in gardens where space is limited. ½pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

Gradus Peas

Add 8 cts. per pint, 10 cts. per quart on Peas to cover postage

PEAS, continued

NOTT'S EXCELSIOR. Same height and season as Little Marvel but the pods and Peas are smaller. Good quality and very prolific. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50c., pk. \$3.25, bus. \$12.

SUTTON'S EXCELSIOR. An improved strain of Nott's Excelsior growing 16 to 18 inches tall and bearing larger pods, containing 7 to 8 Peas of fine quality. Hardy and can be planted a little earlier than other wrinkled Peas. $\frac{1}{2}$ pt. 15 cts., pt. 25c., qt. 50 cts., pk. \$3.25, bus. \$12.

AMERICAN WONDER. Quite similar to Nott's Excelsior. Hardy, reliable, and productive. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

MIDSEASON AND LATE WRINKLED PEAS

POTLATCH. Productive main-crop Pea of special value to the home-gardener on account of its dwarf growth and extra-fine quality. Vines luxuriant, 2 feet high; pods deep green, 5 inches long and quite broad; Peas large and tender, often 10 to a pod. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

DWARF TELEPHONE. Also known as "Daisy." A little earlier than Potlatch, growing 2½ feet tall, with 4½-inch pods, containing 7 or 8 Peas of the very best quality. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

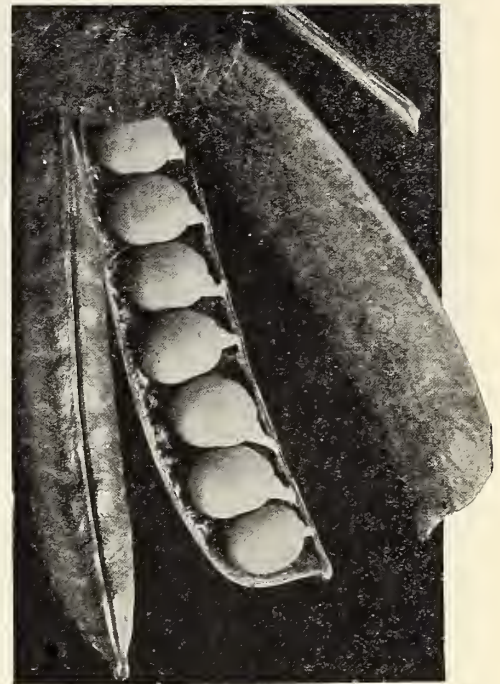
DUKE OF ALBANY. Compares favorably with Telephone in maturity and quality. Closely resembles the Improved Telephone except that the pods are darker green. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

PRINCE EDWARD. One of the newest in this class and probably the most productive. Matures with Telephone; vines medium green, pods dark green in color. Highly recommended to market-gardeners and for late use in the home-garden. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

IMPROVED TELEPHONE. The best strain of this well-known standard variety. The vines are vigorous, growing 4 feet high, with broad, heavy leaves and broad pods, 4½ inches long, light green in color, and well filled with 8 to 10 extra-large Peas. Very productive, bearing several good pickings. Quality fine, the Peas remaining tender and sweet for a long time. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

ALDERMAN. Perhaps the best all-round variety of the Telephone type. Vines very strong and vigorous; leaves and pods rich dark green; productive; quality the finest; matures with Telephone. $\frac{1}{2}$ pt. 15 cts., pt. 25 cts., qt. 50 cts., pk. \$3.25, bus. \$12.

MAMMOTH-PODDED SUGAR. A tall, late, prolific variety which produces big, broad pods, so tender and sweet that the whole pod can be cooked and served like snap beans. If you have not grown sugar-pod Peas, be sure to try them this year. $\frac{1}{2}$ pt. 25 cts., pt. 40 cts., qt. 75 cts., pk. \$5.25, bus. \$20.



Little Marvel Peas. See page 22

PEPPER

An ounce of seed will produce about 1,500 plants

Peppers require a moderately rich and light soil, a long growing season, and plenty of warmth at all stages. Grow them like egg-plants, starting the seed indoors or in the hotbed in March, transplanting to pots or dirt-bands when the second or third leaf has developed, and resetting in the garden about June 1. Space the plants 2 to 2½ feet apart.

RUBY KING. An early and productive, true sweet Pepper. The fruits, when ripe, are bright red, averaging 4 inches in length and 3 inches in diameter, tapering to a blunt point. The flesh is quite thick, sweet, and always mild. A fine variety for the home-garden. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.25, lb. \$4.

WORLD BEATER. A fine, new selection of the Ruby Giant type. Later but larger and a little more blocky in shape than Ruby King; flesh quite thick and sweet; bright scarlet when ripe. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.25, lb. \$4.

RUBY GIANT. Thick-fleshed and, next to Chinese Giant, the largest of the sweet Peppers. Early, reliable, and fairly productive. Deep green, changing to rich red when ripe. A very handsome Pepper of fine quality. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.25, lb. \$4.

SWEET SPANISH. A large, rich scarlet Pepper of exceptionally mild flavor. One of the best sorts for baking or for mangoes. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.25, lb. \$4.

BULL NOSE. Largely grown by market-gardeners on account of its productiveness. Fruits deep green, becoming vivid scarlet as they mature, medium in size, square and blunt-pointed. Generally considered a sweet Pepper but the flesh is often strong in flavor and sometimes quite hot. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.25, lb. \$4.

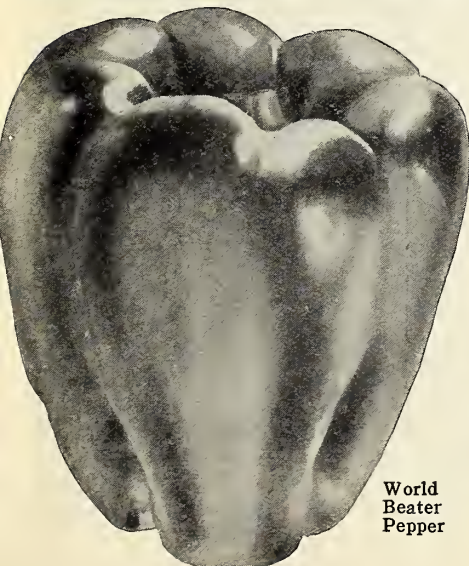
PIMIENTO. A select strain of the famous Spanish Pepper, the thickest-fleshed and choicest quality variety in cultivation. The fruits are bright red when ripe, of medium size, rather conical in shape, and perfectly smooth, with very thick, solid flesh and small seed cavity. The flesh has a mild, sweet, yet pungent flavor, either green or ripe. Fine for slicing, stuffing, and canning. Pkt. 10c., oz. 50c., ¼lb. \$1.25, lb. \$4.

CHINESE GIANT. The largest of all Peppers, the fruits often measuring 5 inches in length and diameter. Late but productive; flesh thick and very mild and sweet; deep red when ripe. Pkt. 10 cts., oz. 75 cts., ¼lb. \$2, lb. \$7.

LONG RED CAYENNE. Pods about 6 inches long, slender and pointed, bright scarlet; flesh extremely hot in taste and pungent in odor. Very prolific. Pkt. 10 cts., oz. 50c., ¼lb. \$1.25, lb. \$4.

SMALL CAYENNE. Bushy plants, loaded with little, slender pods, about 1½ inches long. Fiery hot. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.25, lb. \$4.

LARGE RED CHERRY. Fruits erect, round or cherry-shape and very hot. Pkt. 10 cts., oz. 50 cts., ¼lb. \$1.50, lb. \$5.



World Beater Pepper



Mammoth Golden Cushaw Pumpkin

PUMPKIN

The seed should be sown as soon as the ground gets warm, usually during the latter part of May in this section. Pumpkins are sometimes grown in corn, but for table use it is customary to plant them in hills 6 to 8 feet apart, dropping from four to eight seeds in each hill. It is a good plan to pinch back the vines after they get 4 to 5 feet long. If you want extra-large specimen fruits, dig plenty of manure into the hill before planting and permit only one or two fruits to mature on each plant.

One ounce of seed will plant about 25 hills; 4 to 5 pounds will plant an acre

MAMMOTH GOLDEN CUSHAW. A large crookneck variety with golden orange skin and deep, rich yellow flesh of the very finest quality. A productive sort and largely grown for table use. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

LIVINGSTON CUSHAW. An old standby and a great favorite for pies. Crookneck shape; skin mottled green and white; flesh yellow, fine-grained and sweet. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

SMALL SUGAR. Small but productive and of splendid quality. Fruits round with bright orange skin and thick, sweet flesh. Undoubtedly the best table Pumpkins for the small garden. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

MAMMOTH TOURS. Grows to an enormous size, fruits often weighing 100 pounds or more. Skin mottled green; flesh yellow, rather coarse. Used principally for stock feeding. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.



King of Mammoths Pumpkin

LARGE CHEESE. Big, flat, handsome Pumpkins with light buff skin and yellow flesh. Prolific; largely grown for market and canning. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

KING OF MAMMOTHS. The largest of all; when grown for exhibition fruits sometimes weigh 200 pounds. Round, flattened at the ends, with golden orange skin and deep yellow flesh of fair quality. A good keeper. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

CONNECTICUT FIELD. The common big field Pumpkin. Very productive; fruits oblong in shape, with bright yellow skin and rather coarse flesh. Usually grown for stock. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 85 cts., 5 lbs. \$3.50.

KENTUCKY FIELD. Fruits a little smaller and more round in shape than the preceding. Flesh of better quality and suitable for table as well as stock. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. 85 cts., 5 lbs. \$3.50.



Mammoth Sandwich Island Salsify

RHUBARB

Rhubarb gives best crops on deep, light soil which has been liberally enriched with manure. It is cheapest to start with seed but only a percentage of the plants grown from seed will be worth saving. Sow early in the spring, in drills an inch deep and a foot apart, and thin the plants to stand about 5 inches apart. The following spring, reset the best plants 3 to 4 feet apart each way. If you start with roots, plant them with the crown about 1 inch below the surface. Cultivate Rhubarb frequently and keep the weeds out. Give water, if needed, while the plants are producing and dress with manure every year after the cutting season is over. The first pulling may be made the second season after planting and the plant will continue to bear for many years.

VICTORIA. This is the best all-round variety. Productive and comes fairly true from seed. Seed, pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 60 cts., lb. \$2. Roots, 15 cts. each, \$1.50 per doz.; postpaid, \$1.75 per doz.

SALSIFY

Often called "Vegetable Oyster" or "Oyster Plant" on account of its flavor. Salsify is easy to grow on any good garden soil. Spade to a depth of a foot or more and make the soil as fine as possible. Sow the seed early, as the plants require a long season to attain full size; cover about an inch deep, in rows 12 to 15 inches apart, and thin the plants to 3 inches apart in the rows. Roots may be left in the ground all winter and dug as needed.

One ounce of seed will sow about 50 feet of drill; 10 pounds will sow an acre

MAMMOTH SANDWICH ISLAND. The best variety. Roots often 10 to 12 inches long, tender, and of delicious flavor. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.50.

RADISHES

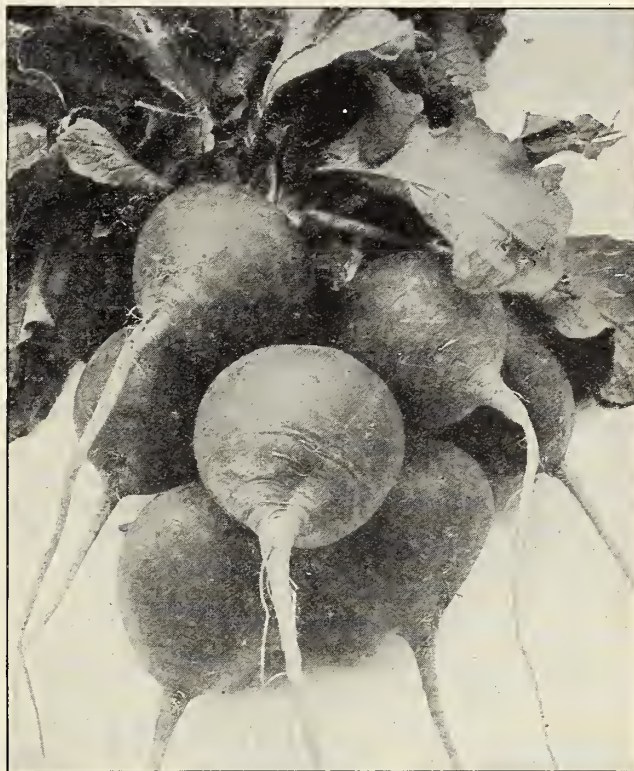
Everybody can and everybody wants to grow Radishes. Most any soil will do; if it is light and mellow so much the better. An extra-early crop can be grown in the hotbed from seed sown in February or early March. Start outdoors as soon as the ground can be put in shape and sow seed of any of the quick-growing round or olive-shaped sorts, not too thick, in drills a half inch deep and 1 to 1½ feet apart. Thin out the seedlings promptly to stand about an inch apart in the rows. Keep them growing fast by hoeing or cultivating every two or three days, otherwise they become pithy and bitter. After putting in seed for the first crop, make additional sowings every ten days to two weeks, but for the later crops, which will ripen in warm weather, use the long varieties. For late summer and fall use, sow the Summer and Winter Radishes which are larger and slower growing but will, unlike the early round Radishes, thrive in hot weather. The Summer Radishes may be sown any time up to August 1. The big Winter Radishes should be sown late in June to attain full size before frost.

One ounce of seed will sow about 100 feet of drill; 8 to 10 pounds will sow an acre

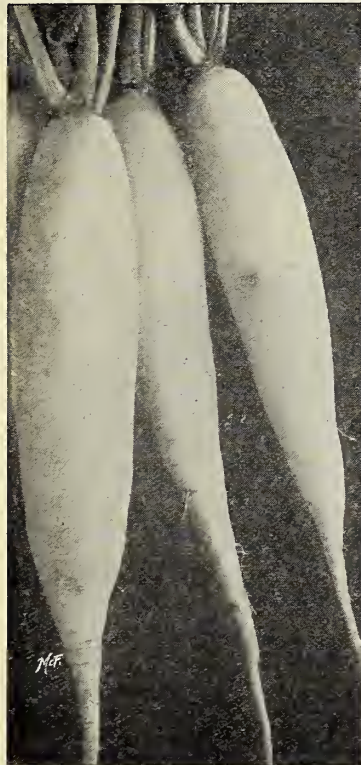
EARLY WHITE-TIP FORCING. A very attractive little Radish for forcing in frames or for early spring planting. Round, bright scarlet with clear white tip; small leaves. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.

EARLY SCARLET TURNIP. Roots of medium size, round, smooth, bright red; tops small. Grows quickly and is one of the old standbys for forcing. Pkt. 10 cts., oz. 15 cts., ¼lb. 40c., lb. \$1.

NON PLUS ULTRA. The earliest forcing Radish in general use, ready for the table in 20 days from planting. Roots small, uniformly globe-shaped, and smooth, with brilliant scarlet skin and crisp white flesh. Fine for early sowing outdoors as well as for forcing. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.



Crimson Giant Radishes



Icicle Radishes

EARLY SCARLET GLOBE. One of the most popular Radishes for early use. Matures medium-sized, elongated, globe-shaped, clear rosy scarlet roots in about four weeks from sowing. Quality fine; a reliable variety for forcing and always in demand. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.

WHITE BOX. A pure white, medium-sized, early, round Radish, especially desirable for growing under glass. Tops small. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.

FRENCH BREAKFAST. An oblong or olive-shaped Radish of very fine quality. Early; bright carmine with clear white tip. Good for forcing and fine for the home-garden. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.

GIANT BUTTER. A round, red Radish, in shape and appearance much like Non Plus Ultra but considerably larger; it grows quickly and is valuable for forcing. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.

BURPEE'S SCARLET BUTTON. A select strain of the Non Plus Ultra class. Extra-early; roots small with bright red skin and crisp, white flesh. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.

CRIMSON GIANT. The largest of the early, round Radishes, maturing in about four weeks from sowing. Handsome, deep red, globe-shaped roots. Good for forcing and fine for the home-garden. Remains crisp and mild longer than other early sorts. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.

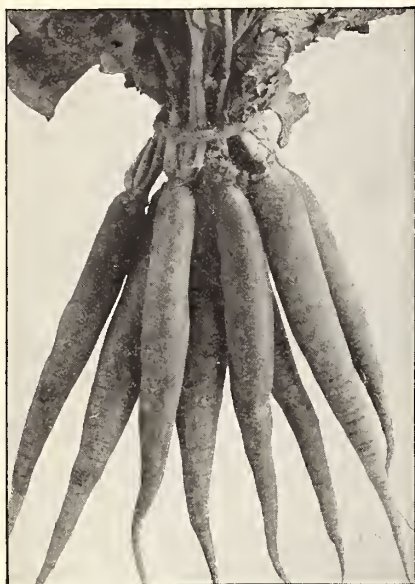
GOLDEN YELLOW OVAL. Popular for late plantings as it grows well in hot weather. Olive-shaped, about 1½ inches long, with russet-yellow skin and pure white flesh of fine flavor. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.

ICICLE. If you grow only one kind of Radish in your garden, you will be safe in choosing Icicle. It grows quickly, making handsome, long, smooth roots with pure white skin and crisp, mild flesh. Being more resistant to heat than other early Radishes, it is reliable for either spring or summer use and retains its crispness and flavor for a long time after it becomes ready for use. Suitable also for forcing. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.25.

LONG SCARLET SHORT TOP. An extra-early long Radish, ready for use 25 days after sowing. The roots grow 5 to 6 inches long, with a third of their length above ground. Bright scarlet. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.

COPENHAGEN MARKET. A short-leaved, round, red sort, with the lower part white. Excellent both for forcing and outdoors. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.

CINCINNATI MARKET. In shape much like Long Scarlet Short Top but a little longer and with a very small top. Skin rosy scarlet; flesh clear white, very brittle and mild. Popular for forcing. Pkt. 10 cts., oz. 15 cts., ¼lb. 40 cts., lb. \$1.



Chartier Improved Radishes

flesh pure white. Of fine quality and a good keeper. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

CHINESE ROSE. Roots 4 to 5 inches long, cylindrical, or larger near the bottom; skin smooth, bright rose in color; flesh white, crisp and tender. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

SUMMER RADISHES

WHITE LADY FINGER. Resembles Icicle but grows more slowly and is particularly desirable for late sowings as it retains its fine, crisp quality for a long time even in the hottest weather. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

WHITE VIENNA. Almost identical with Lady Finger. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

CHARTIER, IMPROVED. A splendid variety to plant for second-early, being intermediate in season between the early and the Summer Radishes. Roots 7 to 8 inches long, bright rose with white tip. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

WHITE STRASBURG. A long, oval Summer Radish of handsome appearance; a leading variety for market. Roots about 5 inches; skin and flesh pure white; remains firm and brittle longer than most sorts. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

WHITE STUTTGART. A large, late, pure white kind, with almost round or top-shaped roots 4 inches in diameter. Of good quality and a good keeper. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

WINTER RADISHES

LONG BLACK SPANISH. One of the hardiest and best keeping sorts. Roots 7 to 9 inches long and 2 to 3 inches in diameter at the top, tapering to an abrupt point. Skin black; flesh clear white and of fine quality. Pkt. 10c., oz. 15c., $\frac{1}{4}$ lb. 40c., lb. \$1.

LONG WHITE SPANISH. Exactly like the preceding except in color of skin. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

ROUND BLACK SPANISH. Similar to the Long Black Spanish. Roots nearly round, 3 to 4 inches in diameter. The round shape is preferred in some markets. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

CELESTIAL, or White Chinese. Grows more quickly than the Spanish types; roots handsome, cylindrical in shape, often 8 inches long and 3 inches in diameter; skin and

SPINACH

One ounce of seed will sow about 100 feet of drill; 14 to 15 pounds will sow an acre

From the standpoint of health, there are few vegetables more valuable than Spinach. Room should be made for it in every garden, small or large. It is easy to grow but should have a moderately rich, well-dug soil. Start the first crop in drills an inch deep and 15 inches apart as soon as the ground can be made ready in the spring, and follow this with succession sowings every ten days up to the middle of May. Make additional sowings in August and September for fall use. Thin the plants to stand about 5 inches apart. To provide Spinach during hot weather, when ordinary varieties do not thrive, make a sowing of the heat-resistant New Zealand Spinach about May 1. For extra-early Spinach in the spring, sow one of the hardy sorts late in September and protect the plants over winter with straw or leaves.

BLOOMSDALE SAVOY-LEAVED. Very hardy and, consequently, most desirable for autumn and early spring use. The plants are upright and vigorous, with thick crumpled leaves. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 50 cts., 5 lbs. \$1.75, 10 lbs. \$3, 25 lbs. \$6.25.

TRIUMPH. A large-growing variety which stands for a long time before going to seed. Leaves broad, somewhat crumpled, tender, and of fine flavor. For spring and early summer. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 50 cts., 5 lbs. \$1.75, 10 lbs. \$3, 25 lbs. \$6.25.

LONG SEASON. Somewhat like Triumph, remaining in marketable condition a long time. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 50 cts., 5 lbs. \$1.75, 10 lbs. \$3, 25 lbs. \$6.25.

VICTORIA. Another variety of the Triumph type, which stands hot weather better than other sorts and is slow to go to seed. Leaves very large and thick, deep green in color, and of superior quality. Oz. 10c., $\frac{1}{4}$ lb. 20 cts., lb. 50 cts., 5 lbs. \$1.75, 10 lbs. \$3, 25 lbs. \$6.25.

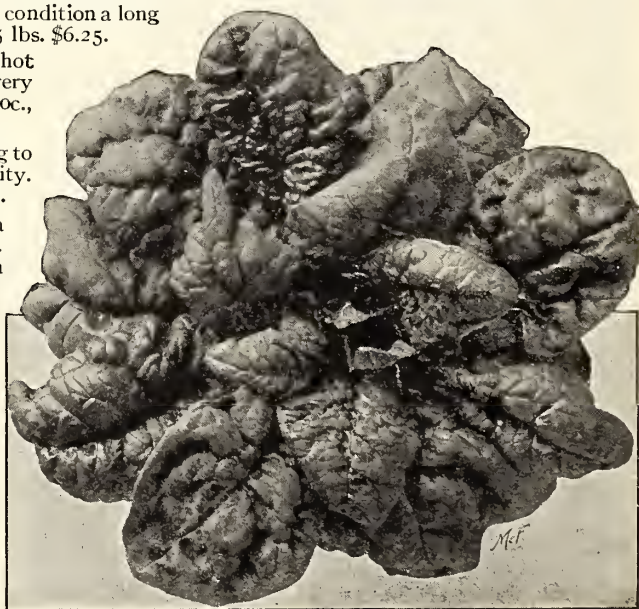
LONG STANDING. So named because it is extremely slow in running to seed. Large, thick, and crinkled and especially good in quality. Oz. 10c., $\frac{1}{4}$ lb. 20c., lb. 50c., 5 lbs. \$1.75, 10 lbs. \$3, 25 lbs. \$6.25.

KING OF DENMARK. A very fine new Spinach which stands a week or two longer before shooting to seed than any other sort. The plants are large and vigorous, with thick, crumpled, dark green leaves. Oz. 10 cts., $\frac{1}{4}$ lb. 25 cts., lb. 60 cts., 5 lbs. \$2.50, 10 lbs. \$4.50, 25 lbs. \$10.

IMPROVED LARGE ROUND THICK-LEAVED. A hardy, vigorous sort, particularly valuable to market-gardeners for early spring sowing. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 50 cts., 5 lbs. \$1.75, 10 lbs. \$3, 25 lbs. \$6.25.

ESKIMO GIANT. Plants extra-large with smooth, very thick leaves. Extremely hardy and fine for fall planting. Oz. 10 cts., $\frac{1}{4}$ lb. 20 cts., lb. 50 cts., 5 lbs. \$1.75, 10 lbs. \$3, 25 lbs. \$6.25.

NEW ZEALAND. A distinct type of Spinach which makes large, bushy plants, often 3 feet in diameter. Only the young leaves and tips of the branches are used and the more they are picked, the faster the plant seems to grow. Thin or transplant the plant to stand at least a foot apart. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. 75 cts., 5 lbs. \$3.50, 10 lbs. \$6.50.



Triumph Spinach

SQUASH

One ounce of Squash seed will plant 15 to 20 hills; 3 to 5 pounds will plant an acre, according to variety

In general culture the Squashes are much like the melons, but they do not require such a long growing season and are more dependable producers. Best results are secured on light soils which have been heavily manured. Sow the seed in hills, about 4 feet apart each way for the summer varieties and 10 to 12 feet for the late or winter sorts. Do not sow, however, until the soil is warm and dry—the end of May is about right in this section. Use plenty of seed in each hill, twelve to fifteen anyway, to provide against the inevitable losses from insects; after the plants get a good start pull out all but four or five. The Squash vine borer may cause some trouble during the season but can be discouraged by sprinkling tobacco dust close around the plants. Covering the vines with a little soil at several joints so that they take root there will also help to limit its destructiveness. The black Squash bug can best be kept in check by hand picking; spraying with arsenate of lead is the proper remedy for the striped beetle

MAMMOTH WHITE BUSH. One of the earliest and most popular of the Summer Squashes. Compact in growth and prolific, with ivory-white fruits, round with scalloped edges. For both market- and home-gardens. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

YELLOW SUMMER CROOKNECK. An old favorite. Long, curved fruits with

thin, golden yellow, warted skin; sweet, tender flesh. Pkt. 10c., oz. 15c., $\frac{1}{4}$ lb. 40c., lb. \$1.25.

COCOZELLE (Italian Vegetable Marrow). One of the most useful Summer Squashes for home planting. It is bushy in growth, requiring little space, and produces quantities of oblong fruits, averaging a foot long, with green skin, mottled and striped with yellow and darker green. Quality extra-fine. Pkt. 10c., oz. 15c., $\frac{1}{4}$ lb. 50c., lb. \$1.50.

FORDHOOK. An excellent variety, suitable for both summer and winter use. The fruits are oblong, 8 to 10 inches long, with thin, light yellow skin and thick, straw-colored flesh. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

BOSTON MARROW. A productive late variety, generally considered the best for canning and for pies. It is shaped like the well-known Hubbard, with orange skin and thick flesh. A good keeper. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

ORANGE MARROW. Earlier, more prolific, and a little smaller, but otherwise similar to Boston Marrow. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

ESSEX HYBRID. A large, turban-shaped winter Squash of excellent quality. Skin dull orange-red, quite hard; flesh dark orange, thick and sweet; one of the best winter keepers. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

IMPROVED HUBBARD. A selection from the old Hubbard, with more vigorous vine and slightly larger fruits. Skin smooth, dark green; flesh deep yellow and of superb quality. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.



Hubbard Squash

WARTED HUBBARD. Similar in size and shape to the Improved Hubbard, but the skin is heavily warted and very dark green, almost black, in color. The best keeper of the Hubbard type. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

GOLDEN HUBBARD. True Hubbard shape but earlier, a trifle smaller, and the skin is a rich orange-red in color. Flesh deep orange, dry and sweet; an excellent keeper. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

HERBS

Grandmother's garden always had a little patch of herbs and, doubtless, much of the savoriness of grandmother's cooking as well as the effectiveness of her home remedies was derived from her store of "yarbs." Most of the commoner herbs are perennials, although they last but a few seasons in ordinary situations. Any odd corner will do, providing it is sunny and the soil not too hard or poor. Sow seed in early spring, thinning out as needed. The seeds of many herbs are slow and irregular in germinating.

ANISE. Used principally for flavoring and for garnishing. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 60 cts., lb. \$2.

BALM. Used for making a medicinal tea. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

SWEET BASIL. A highly aromatic herb whose leaves and tops are used for seasonings and, in a limited way, in salads. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

BORAGE. An annual plant that is used freely by bee-keepers. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

CARAWAY. The seeds of this plant are used for culinary purposes, in confectionery and also in medicines. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

CORIANDER. An annual whose seeds are strongly aromatic. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.

CURLED CHERVIL. Leaves of Chervil very much resemble those of parsley and are used in a similar way. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 60 cts., lb. \$2.

DILL. An annual plant, seeds of which are used as a seasoning and also in the preparation of Dill pickles. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 35 cts., lb. \$1.

HOREHOUND. Annual; chiefly used for medicinal purposes, as it has strong tonic properties. Pkt. 10c., oz. 30c., $\frac{1}{4}$ lb. \$1, lb. \$3.

LAVENDER. The flowers are delightfully fragrant, imparting a pleasing odor to the contents of linen-chests. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

SWEET MARJORAM. An annual possessing a pleasing fragrance and of particular value as a seasoning. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

RUE. A medicinal plant of extremely pungent taste. Pkt. 10 cts., oz. 35 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

SAFFRON. Cultivated for medicinal purposes, and also for the coloring matter from which comes saffron-yellow dye. Pkt. 10 cts., oz. 25 cts., $\frac{1}{4}$ lb. 75 cts., lb. \$2.50.

SAGE. An old familiar herb with a pungent odor. Pkt. 10 cts., oz. 30 cts., $\frac{1}{4}$ lb. \$1, lb. \$3.

SUMMER SAVORY. Annual, cultivated for the foliage, which is gathered in summer and dried for use in the kitchen during the winter months. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

SWEET FENNEL. The leaves are finely cut and are used for garnishing. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

TANSY. A strongly aromatic plant, with medicinal qualities. Pkt. 10 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

THYME. The leaves and young branches of which are used for seasoning. Pkt. 10 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

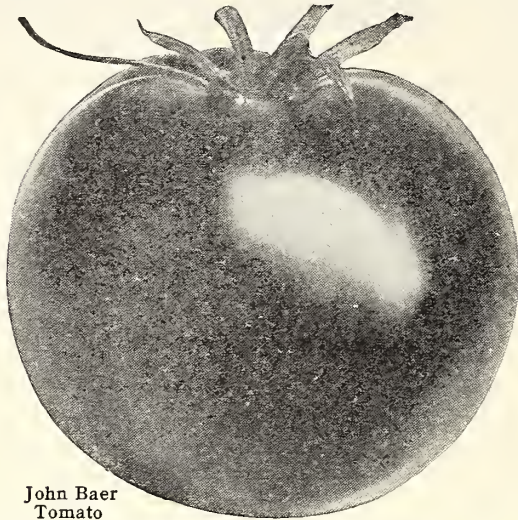


Mammoth White Bush Squash

TOMATOES

An ounce of seed will produce about 2,000 plants;
4 ounces should give sufficient plants for an acre

Thriving in any soil, and producing the most bounteous returns in small space, Tomatoes are an ideal crop for the home-garden. They should have plenty of sunlight and moisture but are not at all particular as to soil. The seed should be sown indoors in late February or March, in shallow boxes or pots placed in a warm, sunny window. As soon as the little plants are strong enough, thin or transplant them to stand 3 to 4 inches apart; then when they are about 3 inches high transfer them to small paper pots or dirt-bands. To secure extra-strong, stocky plants, transfer them again, when 6 to 8 inches tall, to larger pots. As the season advances, "harden" them by exposing them to the air on warm days, but protect them carefully from chill at all times. When all danger from frost is past—generally after the middle of May—set them out in the garden, spacing them about 4 feet apart each way. Water freely at the time of transplanting and push the young plants along with an occasional light application of nitrate of soda or liquid manure. In large field plantings it would hardly be practicable to stake each plant, but in the home-garden it is certainly well worth while, for not only do staked plants take up less room but they produce more and better fruit, and ripen earlier. Set stout stakes 5 to 6 feet high firmly in the ground close to the base of each plant, trim off all but two or three of the strongest shoots and tie these to the stake with strips of cloth, soft twine or raffia. As the plants grow, trim out side shoots and suckers, and when the vines reach the top of the stake, pinch off the tops. To guard against blight spray the plants with Bordeaux mixture or Sulfocide two or three times during the season; arsenate of lead will kill the tomato worms. The average home-gardener will find it advisable to grow at least three varieties of Tomatoes to provide a succession of fruit during the season.



John Baer
Tomato

JOHN BAER. Undoubtedly one of the most valuable of all early varieties of Tomato—especially popular with market-gardeners on account of its handsome appearance and productivity, while its earliness and high quality commend it for the first crop in the home-garden. John Baer matures its first setting of fruits within a few days after the Earliana types, produces larger crops and bears for a longer season. The fruits are of good size, perfectly smooth, and nearly globe-shaped, with brilliant scarlet skin and firm flesh, entirely free from core and with few seeds. The flavor is mild and deliciously sweet. No. 1, pkt. 15 cts., $\frac{1}{2}$ oz. 60 cts., oz. \$1, $\frac{1}{4}$ lb. \$3, lb. \$10. No. 2, pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

NORTHERN ADIRONDACK EARLIANA. Developed from the original Earliana by scientific line breeding under rigorous climatic conditions, this splendid strain has become the most reliable extra-early in many sections. It is hardy, as early as any strain of Earliana in cultivation, and ripens up uniformly. The fruits are a little more globe-shaped than Earliana, always perfectly smooth and bright red in color. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$6.

EARLIANA, SPARK'S. This is the original Earliana Tomato, for years the standby for first-early market. The plants are compact, with light foliage; the fruits are of good size, bright red, and quite solid. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$6.

AVON EARLY. A new variety which ripens with Earliana. It is an unusually reliable producer of large, smooth, deep red fruits which are nearly round, smooth, solid, free from cracks, and excellent for shipping. The flavor is less acid than Earliana. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

JUNE PINK. The best extra-early pink or purplish colored Tomato, similar to Earliana in earliness and in most other respects except color. Pkt. 10c., $\frac{1}{2}$ oz. 20c., oz. 40c., $\frac{1}{4}$ lb. \$1.25, lb. \$4.

BONNY BEST. The most popular Tomato grown to follow Earliana or John Baer. It is remarkably productive even on light soils, producing large, round, smooth fruits in handsome clusters. Uniform in size and shape, solid, free from cracks, bright scarlet in color. A fine variety for the home-garden. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

CHALK'S EARLY JEWEL. Ripening at about the same time as Bonny Best, this variety is an enormous producer, particularly on heavy soils. The fruits are a little larger than Bonny Best, slightly flattened in shape and bright scarlet in color, always solid, with hard, smooth skin. Excellent for market and shipping. Pkt. 10c., $\frac{1}{2}$ oz. 30c., oz. 50c., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

EARLY DETROIT. A pink-fruited Tomato which may be compared with Chalk's Early Jewel among the scarlet sorts. Fruits nearly round, firm, and of fine quality. One of the best for shipping. Pkt. 10c., $\frac{1}{2}$ oz. 25c., oz. 50c., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

GULF STATE MARKET. A new, early, purple-fruited variety, desirable for market-gardeners. Nearly as early as the Early Detroit but a little larger and deeper in shape, with almost no depression at the stem end. Smooth and free from cracks; productive; a good shipper. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

BEAUTY. A popular, main-crop, purple-colored variety which bears for a long season. Fruits large, slightly flattened, solid and of fine quality. Can be shipped long distances without injury. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.



Bonny Best
Tomato



Livingston's Globe Tomato

TOMATOES, continued

LIVINGSTON'S GLOBE. One of the most valuable Tomatoes in cultivation, coming right after Chalk's Jewel and continues to bear until frost, producing heavy crops of good-sized, uniform, distinctly globe-shaped fruits with smooth, glossy, purplish rose skin. Mild in flavor, meaty, and with very few seeds. Pkt. 10c., $\frac{1}{2}$ oz. 35c., oz. 60c., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

MARGLOBE. A recently developed sort of great promise. See description and colored illustration facing page 9. Pkt. 15 cts., $\frac{1}{2}$ oz. 85 cts., oz. \$1.50, $\frac{1}{4}$ lb. \$4, lb. \$15.

TRUCKER'S FAVORITE. A dependable, late, main-crop, purple sort, bearing large, flattened fruits which are smooth and solid and of fine quality. The vines are unusually vigorous and not subject to blights. One of the most productive. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

BEEFSTEAK. Late; purplish pink; vines strong and vigorous; very little seed; large, solid fruit. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$6.

MATCHLESS. A favorite, main-crop, bright red Tomato. The plants are strong-growing, bearing big crops of large, solid fruits. Quality excellent. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$6.

STONE. An unusually productive, smooth, bright red Tomato, probably grown more extensively than any other variety in cultivation. It is a favorite for canning and a most dependable sort for main crop in both market and home-gardens. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

GREATER BALTIMORE. A selection from Stone with all the good qualities of that fine old standby, but comes into bearing a little earlier. It is particularly desirable for canning. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

RED ROCK. Intermediate in season between Chalk's Jewel and Stone and resembles the latter in size and productivity. Fruits extra smooth, round, and bright red in color. Splendid for truckers and canners. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

DWARF STONE. Bushy, compact plants, bearing large, solid bright red fruits of the finest quality. Require little space and no support. Medium early. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

DWARF CHAMPION. Very dwarf and compact in growth. It comes into bearing quite early; the fruits are of medium size, round and smooth with purplish pink skin and firm flesh of fine, mild flavor. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

BUCKEYE STATE. A dark purple Tomato of very large size; late but a heavy cropper. Fruits nearly globe-shaped, always smooth and solid, seldom cracking even when fully ripened. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$2, lb. \$7.

PONDEROSA. One of the best varieties for home-gardens and probably the largest Tomato in cultivation, also the finest in table quality. The plants are vigorous, medium in season, and bear clusters of enormous fruits, which weigh as high as two pounds apiece. Somewhat irregular in shape but extremely solid and with very few seeds. Purplish pink. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

YELLOW PONDEROSA. The yellow-fruited varieties of Tomatoes are preferred for table use by many planters on account of their very mild and sweet flavor. Yellow Ponderosa is similar to the purple Ponderosa except in color. Skin clear golden yellow; flesh pale yellow, solid and meaty. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.

GOLDEN QUEEN. A productive sort, bearing good-sized, round, smooth fruits, bright yellow in color, solid and of splendid quality. Pkt. 10 cts., $\frac{1}{2}$ oz. 20 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

YELLOW PLUM. The fruits resemble a plum in size and shape but are bright yellow in color. Enormously prolific; in great demand for preserving. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts., $\frac{1}{4}$ lb. \$1.75, lb. \$6.



Stone Tomato

SUNFLOWER

Sunflower seed is excellent for feeding to chickens. Any soil, however poor, will give good results, but the plants require plenty of sunlight at all stages. Sow the seed early in the spring in rows 3 to 4 feet apart and thin the plants to stand about 2 feet apart in the rows.

Mammoth Russian. The largest and most productive variety, growing to a height of 6 to 8 feet and producing seed-heads of enormous size. Oz. 10 cts., $\frac{1}{4}$ lb. 15 cts., lb. 40 cts.

VEGETABLE PLANTS

During the planting season we are prepared to furnish the following plants:

Tomato, Cabbage, Cauliflower, Beet, Pepper, Kohlrabi, Kale, Brussels Sprout, Celery, Sweet Potato, and Eggplant. Ask for prices when planting season opens, specifying number wanted.



Purple-Top Strap-Leaf Turnip

EXTRA-EARLY WHITE MILAN. The quickest growing of the Turnips, largely used for spring sowings. The roots are small and flat with pure white skin and flesh; fine-grained, mild and sweet. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 40 cts., lb. \$1.25.

YELLOW GLOBE. Round, smooth roots of medium size, with light yellow skin and flesh. A good main-crop Turnip for both table and stock feeding. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 75 cts.

COW HORN. Roots shaped rather like a carrot, often over a foot long and 3 inches in diameter, with a considerable part of their length above ground. Skin and flesh white; quality excellent. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 75 cts., 5 lbs. \$3.25.

RUTABAGA, or SWEDE TURNIP

Rutabagas are grown much like garden Turnips but they require a longer season and attain a larger size. Sow during June or early July in rows 15 to 18 inches apart and thin out to 8 to 10 inches. Where the summers are temperate an early crop can be grown from spring sowings. Although largely grown for feeding to stock, Rutabagas are considered by many to be superior to Turnips in table quality and they are particularly good winter keepers. Dig the roots before the ground freezes and store in a cold cellar or in pits outdoors.



Improved Purple-Top Rutabaga

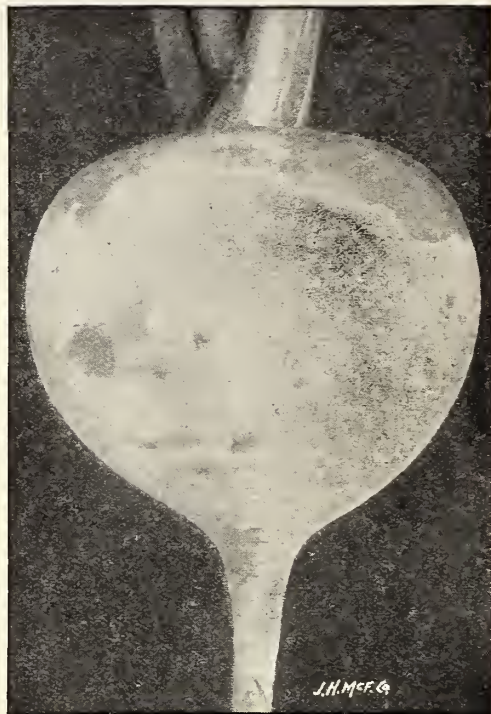
TURNIPS

Any ordinary garden soil will produce good crops of Turnips. Freshly manured land should not be used, but deep digging and thorough preparation are essential to produce smooth, well-flavored roots. As Turnips develop best in cold weather, the main crop is usually sown in July or August, to mature during the fall, but early-season crops can be obtained by sowing the quick-maturing varieties as soon as the ground can be prepared in the spring. Sow in drills 12 to 15 inches apart and cover firmly with about $\frac{1}{2}$ inch of soil. Scatter the seed thinly so as to reduce the amount of thinning required when the plants are 2 to 3 inches high. The early sorts should stand 3 to 4 inches apart in the rows and the large main-crop Turnips about 6 inches. The roots may be stored like Beets for winter use, if dug before hard frost.

An ounce of seed will sow about 100 feet of drill; a pound will sow an acre

PURPLE-TOP STRAP-LEAF. A quick-growing variety desirable for both early and late planting. The roots are flat and quite large; skin white except for a ring of purple around the top; flesh white, fine-grained and of excellent table quality. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 75 cts.

PURPLE-TOP WHITE GLOBE. The standard main-crop Turnip for market and often grown for feeding to stock. The roots are large, nearly round, white with upper third purple. The flesh is firm and of good quality. Productive and a splendid keeper. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 75 cts.



Purple-Top White Globe Turnip

SWEET GERMAN. A large, globe-shaped variety with white skin and flesh. Fine-grained, solid and sweet, lacking the strong taste which many Turnips develop. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 75 cts.

IMPROVED PURPLE-TOP. Hardy and productive with large, globular roots, very uniform in shape and size. Skin smooth, light yellow with purple top; flesh yellow, firm, and of fine quality. Can be stored in good condition all winter and well into the following summer. Pkt. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 30 cts., lb. 75 cts.

TOBACCO

For best results, Tobacco requires a rich, mellow soil and careful cultivation. Sow the seed in frames or a fine seed bed early in April and reset the plants in the open ground late in May or early in June, spacing them 2 feet apart in rows 4 feet apart. Cultivate frequently.

CONNECTICUT SEED-LEAF. One of the hardiest and most popular sorts. Pkt. 10 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

HAVANA. True type; productive and of finest quality. Pkt. 10 cts., oz. 40 cts., $\frac{1}{4}$ lb. \$1.50, lb. \$5.

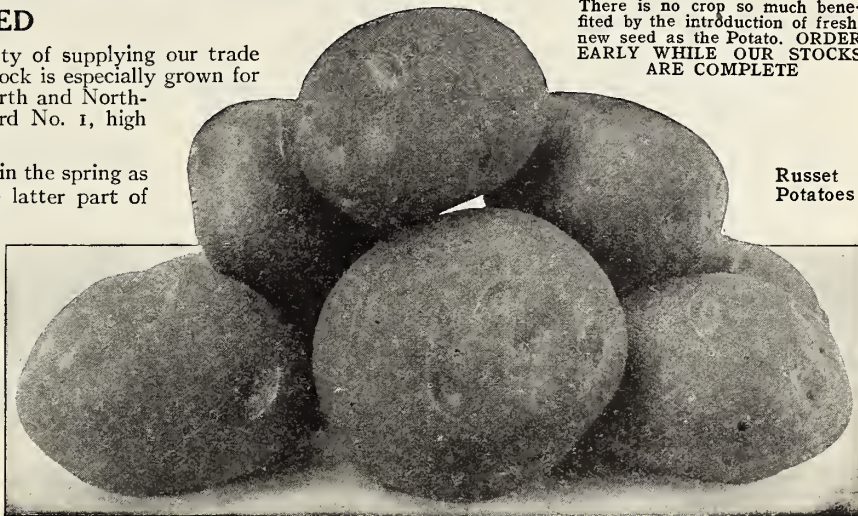
NORTHERN-GROWN SEED POTATOES

CERTIFIED SEED

For many years we have made a specialty of supplying our trade with northern-grown Seed Potatoes. Our stock is especially grown for seed, by experienced growers in the cold North and Northwest, and is Certified Stock, U. S. Standard No. 1, high quality, true to type and free from disease.

We begin shipping Seed Potatoes as early in the spring as weather conditions will permit, usually the latter part of March. However, we urge our customers to place their orders early, while our stock of all varieties is complete, as it frequently happens that we are unable to supply certain varieties late in the season. Owing to the perishable nature of Seed Potatoes the market is subject to radical changes, and it is impossible for us to guarantee prices; therefore, the prices given here are subject to change. Special prices will be quoted on five-barrel lots and upward on request. Each sack contains 165 lbs. of full-sized tubers. Prices, f. o. b. Pittsburgh.

There is no crop so much benefited by the introduction of fresh, new seed as the Potato. ORDER EARLY WHILE OUR STOCKS ARE COMPLETE



Russet Potatoes

EARLY VARIETIES

Sacks contain 165 pounds or 2¾ bushels

EARLY SIX WEEKS. (Certified.) A very early Potato, somewhat resembling the Early Ohio. **Pk. \$1.25, bus. \$4.50, sack (2¾ bus.) \$11.**

EARLY MANISTEE. (Certified.) The Manistee is a seedling of the Rose, round to oblong in shape, slightly flattened, skin light pink, eyes near the surface, flesh pure white and table quality that is hard to beat. Growers of the old Early Rose variety will not be disappointed in Early Manistee as a substitute. **Pk. \$1.25, bus. \$4.50, sack (2¾ bus.) \$11.**

EARLY OHIO. (Certified.) A sort that is well known by market-gardeners who are after a first-early Potato for home trade; the tubers are almost round, with pink skin and of excellent quality. **Pk. \$1.25, bus. \$4.50, sack (2¾ bus.) \$11.**

IRISH COBBLER. (Certified.) An extra-early, round, white Potato. Vines yield heavily and the tubers are of extremely fine quality. **Pk. \$1.25, bus. \$4.50, sack (2¾ bus.) \$11.**



No. 9 Hiruco Potato

LATE VARIETIES

Sacks contain 165 pounds or 2¾ bushels

HIRUCO No. 9. (Certified.) Grown from Hiruco stock seed, direct from originators. This smooth-skinned Rural type Potato was produced from a seed-ball in 1905. Since its inception it has been widely distributed among particular growers and in the latter years has been cultivated in New York state by more growers entering their crops for inspection than has any other one variety. In 1919 the originators selected this variety on which to do special work for their leader, believing it to have the greatest combination of good points of any Rural type Potato. This variety has always excelled in its eating quality, heavy-yielding ability, shallow and well-placed eyes, the latter making it cut to much better advantage for seed than do many of the other well-known varieties. The extensive selection has increased the setting ability and freed this source of the diseases which are so common. Its smooth white skin makes it have a beautiful appearance and therefore satisfies a wider range of markets than a rougher skinned tuber. **Pk. \$1.25, bus. \$4.50, sack (2¾ bus.) \$11.**

RUSSET. (Certified.) It is an exceptionally heavy yielder, table quality of the very best, and with smooth, velvety, russet skin and shallow eyes. No Potato can surpass it in uniform and handsome appearance. It is very fine-grained, cooks as white as flour, and is of splendid flavor; an excellent keeper and retains its good eating qualities until late in the spring. It is one of the hardiest varieties known. Its great productiveness, handsome color and resistance to diseases make it a very popular Potato and one especially suited to our locality. **Pk. \$1.25, bus. \$4.25, sack (2¾ bus.) \$10.25.**

CARMAN No. 3. (Certified.) Extra large, oblong, slightly flat, white. Vines are extra-good growers and yield an immense quantity of tubers of uniform size. One of the best late varieties; of excellent quality; good keeper. **Pk. \$1.25, bus. \$4.25, sack (2¾ bus.) \$10.25.**

SIR WALTER RALEIGH. (Certified.) The tubers vary from round to oblong in shape, uniformly of good size, white-skinned and of excellent quality. A good keeper, and, like Carman No. 3, a very heavy yielder. **Pk. \$1.25, bus. \$4.25, sack (2¾ bus.) \$10.25.**

Prices are subject to change—higher or lower. Prices on large quantities or carloads quoted on request. If you are interested in Potato machinery, write for special catalogue giving detailed descriptions of Potato Planters, Diggers, and Sprayers



FLOWER SEED DEPARTMENT

Each year the interest in flowers for garden and home decoration increases and more people turn to the growing of flowers for recreation and pleasure. Flower-lovers will find a number of new varieties in our lists this year, as well as all of the old friends. We have devoted most of our attention to the "annuals," that is, the kinds which grow, produce flowers, mature, and die the same season, since these are generally found most satisfactory in the average garden. Among the Annuals are flowers for every purpose, tall and low-growing, trailing and climbing, for cutting and for garden display. Those who want Perennials, the kind which live from year to year, usually prefer to purchase the plants already started, although a great deal of the pleasure in gardening comes in raising your own plants from seed.

ASTERS

The Asters deserve to lead the list, for there are few flowers more desirable or satisfactory to grow. The beginner will find their culture easy, while the experienced gardener can exercise his skill in producing flowers of giant size or unusual form. The early Asters commence to bloom in late July; the late types follow in August or September and continue to bloom through October until killed by frost.

Asters will grow in any good garden soil, but they prefer an open, sunny situation and they respond amazingly to fertilizers and good cultivation. It is advisable to change the location of the Aster bed each year if you want large flowers and lots of them. For early bloom, start the seed in a window-box indoors or in a coldframe or hotbed, in March, giving the little plants plenty of light and water as required, and thinning them out to stand 3 to 4 inches apart, or transplanting them when a few inches high to small pots to make them sturdy. Set them out in the garden in May, after all danger from late spring frosts is past. For solid beds of color, set the plants 8 to 10 inches apart, but if large flowers and long stems are wanted for cutting, plant them at least 1 foot apart in rows 1½ to 2 feet apart. The seed may also be sown outdoors in early May with equally good results, except that the plants will not come into bloom so soon.

If the plants show a tendency to wilt or the tops die, the trouble is probably due either to root-aphis or stem-rot, and the most effective remedy is frequent cultivation and sprinkling the entire surface of the bed with air-slaked lime or wood-ashes. The little black Aster beetle which attacks the flowers can best be destroyed by hand-picking.

SEMPEL'S BRANCHING. Our selected strain of this fine, tall, late-blooming type is very popular with home-gardeners. It produces extra-large flowers, with heavy, incurved petals, on long, stiff stems. A magnificent sight in the garden from late August until frost and ideal for cutting. Beds of separate colors are most attractive.

Pure White, Dark Blue, Rose-Pink, Crimson. Each, pkt. 10 cts., ½oz. 85 cts., oz. \$1.50.

Mixed. All of the above colors. Pkt. 10 cts., ½oz. 75 cts., oz. \$1.25.

QUEEN OF THE MARKET ASTERS. The earliest type, commencing to bloom in July. The plants are low and bushy, bearing quantities of large, deep flowers.

White, Pink, Crimson, Lavender, Purple. Each, pkt. 10 cts., ½oz. 85 cts., oz. \$1.50.

Mixed Colors. Pkt. 10 cts., ½oz. 75 cts., oz. \$1.25.

ALYSSUM. The ever-popular and always satisfactory flower for edging beds or planting in porch-boxes or rockeries. Sow the seed in the open ground any time from early April to June. Blooms all summer.

White Sweet. The old-fashioned variety. Low-growing and spreading; sweet-scented; flowers pure white. Pkt. 5 cts., ½oz. 15 cts., oz. 25 cts.

Little Gem. A dwarf form which makes dense, round, little bushes about 6 inches high, covered with white flowers; very fragrant; particularly fine for edging. Pkt. 10 cts., ½oz. 25 cts., oz. 40 cts.

Procumbens. Carpet of Snow. Plants grow only a few inches high, and are covered with snow-white blossoms. Best for florists' use. Pkt. 10 cts., ½oz. 30 cts., oz. 50 cts.



Sempe's White Branching Asters

AGERATUM. This thrifty annual, sometimes called "Floss Flower," is splendid for low borders and edging, and is often used for porch-boxes. From seed sown outdoors in May, it comes into bloom in July and flowers continuously until frost, but in order to have blooming plants earlier in the season, the seed is commonly started indoors in March. The plants should stand 10 to 15 inches apart.

Blue Perfection. Valued for its pretty, deep lavender-blue flowers which are borne in great profusion. The plants grow about 15 inches high. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

Dwarf Blue. Low and compact, growing only about 10 inches high. Small, fluffy, azure-blue flowers. Fine for edging. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

AMARANTHUS. Striking plants grown for their brilliantly colored foliage. The seed is usually started

in the house or hotbed early in the spring, or in a special seed-bed outdoors later on, and the young plants transplanted when a few inches high to the place where they are to stand during the season. Either singly or in groups, they offer most effective contrast to plants with green foliage.

Tricolor. Often called "Joseph's Coat." The plants are tall and erect, attaining a height of 5 feet in good soil. The luxuriant foliage is gorgeously marked, with scarlet, yellow, and green. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

BALLOON VINE. A rapid-growing annual climber with dark green leaves and small white flowers, followed by curious balloon-like seed-pods. An interesting and desirable vine to grow on porch trellises. Sow the seed during late April or May. Sometimes grown in pots and porch-boxes. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

BALSAM. Everyone knows this old familiar flower by the name of "Lady's Slipper." The plants are tender when young so the seed should either be started inside or sown outdoors late in May when the soil and weather are warm. Once started, however, they grow luxuriantly on almost any soil. Thin or transplant to stand about 1 foot apart.

Double Varieties, Mixed. Large flowers, resembling camellias, in white, all shades of pink, scarlet, deep crimson, and purple, some of them attractively spotted and blotched. Pkt. 5 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.



Ageratum, Blue Perfection

BEGONIA. The Begonias are great favorites, both as pot plants in the home in winter and for outdoor bedding during summer. Although tender and warmth-loving, they are true perennials, blooming profusely at all seasons, their masses of blossoms being set off by attractive foliage. The seed is fine and must be sown on well-prepared, rich soil in the greenhouse or in shallow boxes placed in a warm, sunny window.

Vernon. A brilliant variety with deep scarlet flowers and glossy, bronze-colored leaves. Dwarf and bushy in growth. Pkt. 25 cts.

Prima Donna. Makes large, handsome plants, with a profusion of light rose-pink flowers and shining green foliage. Extra fine. Pkt. 25 cts.

Mixed Everblooming Varieties. Pkt. 25 cts.

CALENDULA. The Calendulas or Pot Marigolds are among the brightest and easiest to grow of all garden annuals. They prefer a sunny location but will thrive on any soil and bloom continuously from early summer until late fall. Sow the seed during April or May and thin the plants to 8 to 10 inches. On good soil they grow 15 to 18 inches tall and make fine flowers for cutting.

Orange King. Extra-select Florist Strain. Large, double flowers of deep glowing orange. A favorite for cut-flowers. Pkt. 10 cts., $\frac{1}{2}$ oz. 60 cts., oz. \$1.

Lemon Queen. Like the above but the flowers are clear lemon-yellow. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

Double Mixed. Pkt. 10 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

CALLIOPSIS. Hardy, easy to grow, and free-blooming, Calliopsis is a favorite for cutting. The tall forms are good for mass planting, while the dwarf varieties are especially nice for edging beds or for planting in pots. Sow in April or May and thin to stand 6 to 8 inches apart.

Golden Wave (Drummondii). Medium tall, vigorous and bushy, covered with bright golden yellow flowers with brown centers. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

Dwarf Varieties, Mixed. Beautiful, compact plants about 8 inches high, with flowers in all shades of yellow, yellow with bronze markings, deep crimson, brown, and various combinations. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

CANARY BIRD VINE. A quick-growing, slender annual vine with light green, fern-like leaves and brilliant yellow flowers which some people imagine resemble a bird with half-extended wings. Sow late in May. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

CARDINAL CLIMBER. A slender, quick-growing annual vine with exceedingly ornamental, deeply cut leaves, and small, star-shaped flowers of a most brilliant cardinal-red color, borne in the greatest profusion. Sow after the weather and soil are warm. It is advisable to soak the seed for several hours before sowing. Pkt. 25 cts.



Calendulas

CANDYTUFT. One of the best of all low-growing annuals for beds and edging. Sow the seed early in the spring, and, when the seedlings are strong enough, thin them to stand 6 to 8 inches apart. Candytuft grows best in a rich moist soil, blooming profusely for a long season.

Giant Empress. Undoubtedly the finest of the Candytufts, bearing quantities of extra-large, pure white flower-trusses. Nice for cutting as well as bedding. Pkt. 5 cts., ½oz. 15 cts., oz. 25 cts.

Perennial Iberis gibraltarica Hybrids. A compact form with lilac flowers. Pkt. 10 cts.

Perennial or Evergreen (*Iberis sempervirens*). Bears pure white flowers in the spring, and the leaves are dark glossy green the year round. Fine for edging the perennial borders. Pkt. 10c.

CANNAS. Although the fine orchid-flowered varieties do not reproduce true from seed and must, therefore, be grown from the roots (for which see page 46), many people prefer to grow the old-fashioned Cannas or "Indian Shot" from seed. To insure the seed's sprouting, make an opening in the hard outer coat with knife or file and then place in damp moss. As soon as started, set out in a well-prepared seed-bed, and later transplant to stand at least 1 foot apart.

Large-flowered Dwarf Mixed. Saved from brilliantly colored varieties, including red, yellow, and various striking combinations. Pkt. 10 cts., ½oz. 30 cts., oz. 50 cts.

CANTERBURY BELLS. The Campanulas, or Canterbury Bells, are biennials, producing their best crop of flowers the second season. They are most effective massed in the borders and are sometimes grown in large pots. Sow the seed any time from early June to August, and protect the plants with straw or leaves over winter.

Single Varieties, Mixed Colors. The true "Canterbury Bells." White, Pink, and Blue. Pkt. 10 cts., ½oz. 30 cts., oz. 50c.

Cup-and-Saucer Bells. A very pretty double form. White, Pink, and Blue, mixed. Pkt. 10 cts., ½oz. \$1.25, oz. \$2.

CARNATIONS, MARGUERITE. An improved, large-flowering strain of "Pinks," blooming in three to four months after sowing. The flowers are very fragrant, and last for a long time when cut. The plants are perennial. Sow early in May.

Mixed Colors. Pink, White, Scarlet, Yellow, and Variegated. Pkt. 10 cts., ½oz. 75 cts., oz. \$1.25.

CASTOR BEAN. Extremely large annual plants that may be used for ornamental hedges, for the center of beds of cannas, and as individual specimens wherever a tropical effect is wanted. Sow in May.

Zanzibarensis. A giant strain with leaves often 2 to 2½ feet across. The plants sometimes grow 12 feet high and nearly as broad. Dark green, bronze, or reddish foliage. Pkt. 5 cts., ½oz. 10 cts., oz. 15 cts.

Finest Varieties Mixed. Many different types varying in color of leaf, stalks, fruit, etc. All large. Fine for tropical effect. Pkt. 5 cts., ½oz. 10 cts., oz. 15 cts.



Border of Canterbury Bells



Centaurea imperialis

CENTAUREA. A family of very popular and easy-to-grow flowers.

CYANUS. Familiarly known as "Cornflower," "Ragged Sailor," or "Bachelor's Button." About 1½ feet tall, thriving in almost any situation and blooming freely for a long season.

Double Blue. The finest strain of the favorite deep blue Cornflower. Pkt. 10 cts., ½oz. 30 cts., oz. 50 cts.

Mixed Colors. Pink, White, Blue, and Variegated. Pkt. 10 cts., ½oz. 25 cts., oz. 45 cts.

GYMNOCARPA (Dusty Miller). Grows but a foot high, is excellent for edging beds and borders, and will thrive in any location or soil. Foliage is fern-like and of silvery gray color. Flowers white. Pkt. 10 cts., ½oz. 60 cts., oz. \$1.

IMPERIALIS. The Giant Sweet Sultan, one of the largest of the Centaurea family and the finest for cut-flowers. The large blooms are borne on long stems and are very fragrant.

Mixed Colors. White, Pink, Lavender, Mauve, Purple, Rose, etc. Pkt. 10 cts., ½oz. 30 cts., oz. 50 cts.

CHINESE WOOLFLOWER (*Celosia Chidsii*). An easily grown annual that blooms continuously over a long season, producing a profusion of massive crimson-scarlet, wool-like flowers. None of the blooms fade until killed by frost, so that the whole plant is a mass of glowing color, resembling an enormous bouquet. Height 3 feet. Sow seed outdoors after danger of frost is past. Pkt. 10 cts.

CHRYSANTHEMUMS. Annual Chrysanthemums thrive in any sunny situation and bloom very freely.

Carinatum hybridum. Large semi-double, daisy-like flowers in many brilliant colors. Pkt. 10 cts., ½oz. 40 cts., oz. 75 cts.

CLARKIA. An attractive annual that does well in partially shaded as well as sunny spots, making loose, shrubby plants 2 to 3 feet high, covered with dainty flowers. Nice for cutting.

Improved Double, Mixed. A fine strain, including White, Pink, Salmon, Scarlet, etc. Pkt. 10 cts., ½oz. 30 cts., oz. 50 cts.

COBÆA SCANDENS. An annual climber that grows quickly and makes a good screen of foliage. The flowers are large and bell-shaped, purple in color. Prefers a moist soil and should not be sown until mid-May. Sometimes called "Cathedral Bells." Pkt. 10 cts., ½oz. 30 cts., oz. 50 cts.

COCKSCOMB. The Crested Celosias, or Cockscombs, produce large, brilliantly colored, comb-like heads. They make gorgeous beds and are useful also for borders where bright colors and mass effect are desired. The seed should be started indoors in April or sown in well-prepared soil outdoors late in May.

Finest Mixed Colors. Showy heads of Yellow, Orange, Scarlet, and Purplish Crimson. Pkt. 10 cts., ½oz. 60 cts., oz. \$1.

COLEUS. Popular bedding plants grown for their ornamental variegated foliage. They are easily raised from seed carefully sown on fine soil in boxes indoors or in the greenhouse, and transplanted to the open late in May.

Rainbow Hybrids. A beautifully colored strain. Pkt. 25 cts.

COLUMBINE. The Aquilegias, or Columbines are favorite border perennials, blooming in May and June and thriving best in moist, partially shaded spots. The seed may be sown any time from May to August; the plants require no protection over winter.

Long-spurred Hybrids. These are the finest of the Columbines, producing large flowers in a great variety of delightful colors. Pkt. 10 cts.

COREOPSIS. No flower blooms more abundantly or for a longer season than Coreopsis. Its long stems and bright golden yellow color make it an ideal cut-flower as well as a showy addition to the hardy border. It is easily grown from seed sown any time during late spring or summer and, being perfectly hardy, the plants require no protection in winter and will live for years. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

COSMOS. The free-blooming habit, graceful flowers, and delicately cut foliage make the Cosmos one of the most popular and satisfactory of flowers for late summer and fall use. The plants grow very tall and slender, and each plant will often produce over a hundred flowers in the course of the blooming season. For a background in the annual border and along hedges and fences they are especially appropriate, but they should not be planted in a spot where they will be in shade during the greater part of the day. Practically any soil will grow good Cosmos. If possible, start the seed indoors in early March, as a long growing season is required. Otherwise, sow in the garden about May 1, and thin the plants to stand about 8 inches apart. Many gardeners prefer to pinch off the tops when the plants are about 2 feet high to prevent them from growing too tall and to make them bushy. The flowers are splendid for cutting.

Mammoth Lady Lenox. One of the finest varieties of Cosmos ever produced. The blooms are of enormous size and of a most attractive shade of shell-pink. Tall-growing, blooming from early September until killed by frost. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

Mammoth Fine Mixed. Red, Pink, and White flowers of the giant, late-blooming type. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

Early-flowering Mixed. A large-flowered strain which commences to bloom a month earlier than the preceding; the best to use for late sowings outdoors. The colors are White, Pink, Red, and Crimson. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

CYPRESS VINE. A graceful, slender annual climber with very finely cut foliage and bright little flowers which are produced in the greatest profusion. The vines are useful in ornamental designs. A warm, sunny spot and light, rich soil is preferred. Sow the seed after all danger from frost is past, first soaking it for several hours in warm water to ensure quick germination.

Mixed Colors. Flowers brilliant scarlet and pure white. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

DAHLIAS. It is quite easy to raise Dahlias from seed, provided it is started early in the spring in the hotbed or in a warm window in the house. Set the plants out late in May in a sunny location, spacing them a foot or more apart.

Double Varieties, Mixed. Composed of seed saved from some of the best named sorts. Fine new varieties are produced from seed, no two coming exactly alike in form and color. Pkt. 10 cts., $\frac{1}{2}$ oz. 85 cts., oz. \$1.50.

DAISY, AFRICAN ORANGE. A very bright and thrifty annual for bedding, growing well even on poor soil. The plants are about 8 inches high, bushy and spreading, producing quantities of flowers in various shades and combinations of yellow and orange, all summer long. The botanical name is *Dimorphotheca*. Pkt. 10 cts., $\frac{1}{2}$ oz. 60 cts., oz. \$1.



Mammoth Cosmos

ENGLISH DAISY. The *Bellis perennis*, or English Daisy, is a hardy biennial flower which is very useful for low beds and borders, thriving in partial shade as well as sun and preferring a fairly moist spot. If the seed is sown very early in the spring on well-prepared, fertile soil, and the plants thinned to stand about 6 inches apart, they will bloom the first summer. For very early bloom, sow in a hotbed or coldframe in January or February. The home gardener will probably secure best results by sowing during June or July for flowers the following season. Give the plants light protection over winter.

Double Varieties, Mixed. Large, deep, double flowers ranging from white to dark crimson. Fine imported seed. Pkt. 10 cts., $\frac{1}{2}$ oz. \$1, oz. \$1.75.

SHASTA DAISY. Produced by Luther Burbank and recently selected as the official flower of the American Legion, the Shasta Daisy is one of the loveliest of our easily grown hardy perennials. The flowers measure 2½ to 4 inches across, white with yellow center, resembling a giant field daisy. The stems are stiff and strong; fine for cutting, lasting for two weeks or longer in water. Pkt. 10 cts., $\frac{1}{2}$ oz. \$1.50, oz. \$2.75.

DELPHINIUM. The finest of blue flowers for the hardy border are the Delphiniums, or Perennial Larkspurs. They send up spikes, 4 to 5 feet tall, blooming all summer. Sow the seed in May or June and transplant about 1 foot apart in early September. Perfectly hardy.

Kelway's Gold Medal Hybrids. A famous English strain of great size and vigor, producing flowers in all shades of blue. Pkt. 25 cts.

EUPHORBIA. Showy plants growing about 2 feet high, with ornamental foliage, easily grown from seed which should be sown during May. The plants may be thinned to stand about 6 inches apart.

Variegata. Commonly called "Snow-on-the-Mountain." Leaves deep green, bordered and marked with white. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

ESCHSCHOLTZIA. Better known as "California Poppies," these hardy little annuals make very bright beds and bloom from June until frost. The foliage is bluish green in color and delicately cut; the flowers resemble single Poppies but come in a greater variety of colors. The plants are bushy and grow about 8 inches tall.

Mixed Colors. Deep golden yellow, bright orange, primrose, rich crimson, white, rose and various other shades and combinations. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.



Foxgloves

splashed. Pkt. 5 cts., $\frac{1}{2}$ oz. 10 cts., oz. 15 cts., $\frac{1}{4}$ lb. 50 cts., lb. \$1.50.

FOXGLOVE. The tall spikes of *Digitalis*, or Foxglove, with their long, thimble-shaped flowers, are most effective massed in the borders with a background of shrubbery or among lower-growing flowers. The plants send up stems 3 to 4 feet tall, the upper part crowded with blossoms. Immediately after blooming, remove the flower-stalk and some of the larger leaves at the base; this will result in a number of new plants which start from the old crown and will produce flowers the next year. Sow the seed in late May or June and transplant in the fall, spacing the plants 10 to 12 inches apart.

Mixed Colors. White, Pink, and Purple flowers, spotted with deep crimson or chocolate in the throat. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

GAILLARDIA. The Gaillardias, or "Blanket Flowers," are extra-good bedding plants. They are vigorous and bushy, producing their large, showy blooms all summer long. **Grandiflora.** A perennial variety which, if given a little protection over winter, will live in the garden for years. The flowers are large and very bright, coming in orange-yellow, scarlet, and crimson, and various combinations of red and yellow. Desirable for cutting as well as garden display. Sow seed in May and space the plants about 1 foot apart. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

GERANIUM. Great favorites for bedding and window-boxes. Seed saved from the choicest varieties. Pkt. 25 cts.

GLOBE AMARANTH. The *Gomphrena*, or Globe Amaranth, is one of the "straw flowers" or "everlastings" so popular for winter bouquets. The plants grow 2 to 3 feet tall, with globe-shaped flowers which may be cut and dried in their natural colors. Sow in April or May and thin to about 8 inches apart.

Mixed Colors. White, Pink, and Purplish Crimson. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

GODETIA. These are very brilliant, free-flowering annuals that seem to prefer a rather poor, heavy soil. Sow the seed in April and thin to stand about 10 inches apart. The plants are bushy, with attractive foliage, and the flowers are quite large, somewhat resembling single hollyhocks. Gardeners who have not grown Godetias should try them, as they make most attractive beds and borders.

Dwarf Compact, Mixed. The most improved type, with flowers White, Pink, Red, Deep Crimson, and Red and White. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts.

FORGET-ME-NOT. The familiar blue Forget-me-not, or *Myosotis*, is a biennial but it will bloom the first summer from seed sown in early spring. If early spring flowers are wanted, sow in July and transplant the young plants to their permanent bed about the middle of September. A partially shaded location and moist soil give best results. Pkt. 10 cts., $\frac{1}{2}$ oz. 85 cts., oz. \$1.50.

FOUR O'CLOCK. The Four o' Clocks, or old-fashioned "Marvel of Peru," make most effective beds and annual hedges. The plants grow about 2 feet tall, broad and bushy, with lustrous dark green leaves and quantities of fragrant flowers which open late in the afternoon and remain open all night, closing again the next morning. Sow in April or early May and thin plants to stand about 1 foot apart. Four o'Clocks will grow vigorously in any sunny spot.

Mixed Colors. Flowers White, Yellow, Lilac, Pink, and all shades of Red, some beautifully striped and

GOURDS. Some of the Gourds are ornamental in fruit as well as foliage and are excellent for covering old fences or stumps and trailing on trellises and arbors; other kinds produce fruit useful in various ways; and all are interesting to grow. Sow the latter part of May.

Dish-Rag. Sometimes called Sponge Gourd. The inside of the ripe fruit is like a tough, fibrous cloth or sponge. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 60 cts.

Dipper. The ripe fruits, cut away and cleaned out, make very serviceable dippers. They are often seen in the country, hanging by "the old oaken bucket." Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 60 cts.

Ornamental Varieties, Mixed. Includes a great number of interesting and diverse forms of Gourd. Pkt. 10 cts., oz. 20 cts., $\frac{1}{4}$ lb. 60 cts.

GYSOPHILA. The annual *Gypsophila*, or "Baby's Breath," is largely used in making up bouquets and is a most attractive adjunct to the cut-flower garden. The plants are large and bushy, with feathery foliage and little star-shaped flowers, growing thriftily in any garden. Sow in April or May and thin to 1 foot.

Elegans, White. Pure white flowers. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

HELICHRYSUM. This is the best of the "Straw Flowers," exceedingly popular for its bright, lasting colors. The flowers are borne on long stems and are often 2 to 3 inches in diameter. Sow in April or May and thin to 10 inches apart. To preserve the flowers for permanent bouquets, pick them when half opened and hang them by the stems, head down, to dry in a shady place.

Monstrosum, Mixed. Giant, double flowers, in an assortment of colors, including Reds, Yellow, Orange, Carmine, Violet, etc. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

HELIOTROPE. The old favorite, prized for its delightful fragrance. It is a tender perennial that can be grown in pots or in the garden. Start the seed indoors in March and transplant to the garden late in May, or sow outdoors in a finely prepared seed-bed after the soil and weather are warm. The plants may be cut back in September, potted up and taken in the house for winter.

Extra-Fine Mixture of Dwarf Varieties. Pkt. 10 cts., $\frac{1}{2}$ oz. \$1.75, oz. \$3.

HOLLYHOCK. The Hollyhocks need no description. Whenever tall-growing plants can be used they are wonderfully effective, with a charm all their own. They are biennials or perennials and the seed is best sown in July or August for blooming the following summer. The plants should be given a light protection of leaves the first winter. Almost any soil will do, but they bloom most freely and continuously on a deep, loamy soil and in a sunny situation.

Finest Double Varieties, Mixed. This extra-fine strain grows 5 feet tall and produces large, double flowers in White, Yellow, all shades of Pink and Red, and Maroon. Pkt. 10 cts., $\frac{1}{2}$ oz. 60 cts., oz. \$1.



Double Hollyhocks

JAPANESE HOP. A very rapid-growing annual vine which, on account of its dense, attractive foliage, is valuable for porch-screens and arbors. It is not particular as to soil and will stand hot, dry weather. The growth is thicker and the leaves broader than the common hop of commerce.

Green-leaved. The ordinary form of Japanese Hop. Pkt. 10 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

Variegated-leaved. Leaves splashed with green on white ground. Pkt. 10 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.

HUNNEMANNIA. A very desirable flower of the poppy family, sometimes called Giant Yellow Tulip Poppy. The plants are bushy and grow $1\frac{1}{2}$ to 2 feet tall, with bluish green, finely cut leaves and many bright yellow flowers, 3 to 4 inches across, blooming all summer. Sow the seed early in the spring, and thin to stand at least $1\frac{1}{2}$ feet apart. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

HYACINTH BEAN. (*Dolichos Lablab*). A very pretty annual climber which quickly grows to a height of 8 to 10 feet and bears quantities of clustered flowers which resemble pea blossoms, followed by lustrous purple pods. Ornamental and useful wherever a dense shade is not needed. Sow the seed in late May, preferably in light, dry soil.

Mixed Colors. Flowers, White and Deep Lavender. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

ICE PLANT. A low-growing annual with tender stems and leaves, portions of which are transparent and resemble little icicles. It is interesting and valuable for basket and vase-planting, and for edging beds of taller-growing plants. Sow the seed after all danger from frost is past and thin or transplant to 8 to 10 inches apart. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

JOB'S TEARS. An ornamental grass which grows 2 to 3 feet high and bears large, ivory-white seeds from which it gets its name. The children enjoy making necklaces from the hard seeds. Pkt. 5 cts., $\frac{1}{2}$ oz. 15 cts., oz. 25 cts.



Kochia

KOCHIA. A very attractive and symmetrical annual hedge plant, also known as "Summer Cypress" and "Burning Bush." It grows about 2 feet high, making beautifully rounded bushes which resemble clipped evergreens. During the summer the foliage is bright, light green but in the fall the color changes and, in the course of a week or two, the whole plant is a ball of crimson. It will grow on almost any soil but thrives best in full sun. Sow the seed during the latter part of May and thin or transplant the plant when a few inches high to stand about $1\frac{1}{2}$ feet apart. Pkt. 10 cts., $\frac{1}{2}$ oz. 25 cts., oz. 45 cts.

LOBELIA. Dainty little plants, popular for porch-boxes, vases, and low beds. They should have a deep, moist soil and the seed should be started indoors in February or March and the plants set out in May.

Crystal Palace Compacta. Rich dark blue flowers; dark green foliage; dwarf and compact in growth. Pkt. 10 cts., $\frac{1}{2}$ oz. \$2.25, oz. \$4.

LARKSPUR. Favorite, easy-to-grow annuals, producing their tall spikes very freely for several weeks during summer. They are most effective planted in the border in groups among lower-growing flowers. Sow the seed in April and thin or transplant to stand 8 to 10 inches apart.

Double Dwarf Rocket, Mixed. The plants of this free-blooming dwarf strain grow about $1\frac{1}{2}$ feet tall. The colors include Light and Dark Blue, White, Pink, Carmine, and Violet. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

Tall Double Stock-flow-ered, Mixed. Plants 3 feet tall, with candelabra-like branches and long spikes closely set with large, double flowers. Light and Dark Blue, White, Pink, Carmine, and Violet. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

LUPINS. The Lupins, or "Sun-Dials," as

they are sometimes called, are fine for planting in moist or partly shaded spots, although they will not thrive in a sour soil. They make bushy plants with very attractive leaves and long spikes, closely set with blossoms. Give them plenty of lime, wood-ashes, bone-meal, or other soil-sweetening fertilizers.

Polyphyllus. A hardy perennial form which grows $2\frac{1}{2}$ to 3 feet tall, and comes in White, Pink, and Lavender-Blue. Sow in May or June and thin to $1\frac{1}{2}$ feet apart. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

MARIGOLD. Vigorous, free-blooming annuals, thriving on any soil but preferring plenty of sunlight. They are prized for their brightly colored flowers which are set off by handsome, very dark green foliage. The African Marigolds grow about 2 feet tall with immense globular blooms, while the French kinds are only about 10 inches high with smaller flowers but more of them.

African Orange Prince. Very large and double; deep glowing orange. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts.

African Lemon Queen. A companion to Orange Prince, but clear lemon-yellow. These two varieties, planted on rich soil, produce enormous flowers. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60 cts.

African Double, Mixed. Shades of orange and yellow. Pkt. 10 cts., $\frac{1}{2}$ oz. 35 cts., oz. 60c.

French Dwarf, Mixed Colors. Double flowers; orange and yellow variously striped and marked with reddish brown. Splendid for edging beds. Pkt. 10 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.



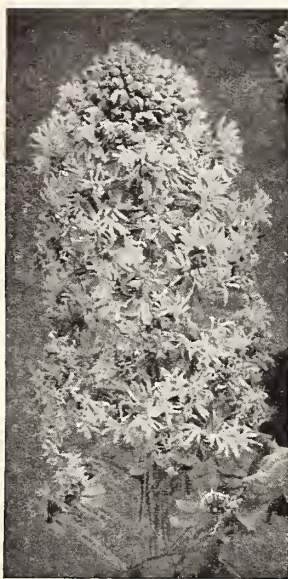
Larkspur



Marigold

GARDEN BOOKS

See page 207 for our list of the latest and best Farm and Garden Books.



Mignonette

MIGNONETTE. Highly valued for its distinct fragrance. It can be grown in the garden, or in pots in the house any time during the year. For outdoor plants, sow the seed about May 1, in a dry, sunny spot. By shading the plants during mid-summer, the season of bloom may be prolonged until late fall.

Common Sweet. Small flowers but very free-blooming and extremely sweet-scented. Pkt. 5 cts., ½ oz. 10 cts., oz. 15c.

Giant Machet. A much-improved florists' strain with giant spikes of reddish green florets. Pkt. 10 cts., ½ oz. 30 cts., oz. 50 cts.

MIMULUS. Various known as "Musk Plant" and "Monkey Flower." They are dwarf, inclined to trail, and profuse in bloom, the flowers bearing a resemblance to a mask or face. Nice for baskets and vases.

Moschatus. Musk-scented foliage and small yellow flowers. Pkt. 10 cts., ½ oz. \$1.75, oz. \$3.

MOMORDICA. Vigorous climbing vines with ornamental fruits, and foliage that is dense enough to make a pleasant shade.

Charantia (Balsam Pear). Grown by the Chinese under the name of "La-Kawa." The pear-shaped fruits are edible and are usually prepared by boiling before they are fully ripened. Pkt. 5 cts., ½ oz. 15 cts., oz. 25 cts.

Balsamina (Balsam Apple). More slender and graceful than the Balsam Pear. Flowers yellow, with dark centers; fruits orange, round and about 3 inches in diameter, sometimes dried and used in medicinal preparations. Pkt. 5 cts., ½ oz. 15 cts., oz. 25 cts.

MOONFLOWER. Quick-growing, slender vines with big, round blossoms that open in the evening and are closed during the day. They succeed best if the seed is sown in a hotbed or box indoors and transplanted once or twice before setting outdoors. Do not sow outdoors or set out plants until all danger from frost is past.

Grandiflora Alba. Clear white flowers, 4 to 5 inches in diameter. Pkt. 10 cts., ½ oz. 40 cts., oz. 75 cts.

Heavenly Blue. Flowers of a most attractive shade of sky-blue, shaded with rose at the edges. Sometimes grown in pots. Pkt. 10 cts., ½ oz. 60 cts., oz. \$1.

MORNING-GLORIES. Fine for covering fences and trellises on account of their rapid, luxuriant growth. They bloom freely all summer. Sow in late April or May.

Fine Mixed. The common Morning-Glories in a splendid assortment of colors, including Light and Dark Blue, Rose, Bright Red, Violet, and Variegated. Pkt. 5 cts., oz. 10 cts., ¼ lb. 25 cts., lb. 75 cts.

Giant Japanese. A strain of Morning-Glories with extra-large flowers of unusually fine colors. White, Pink, Mauve, Chocolate, Purple and various other attractive colors, many bordered with white or blotched with white in the throat. Extra-fine. Pkt. 5 cts., oz. 20 cts., ¼ lb. 50 cts., lb. \$1.50.

MOURNING BRIDE. It is a pity this flower does not have a more pleasing name for it is one of the finest annuals for cutting. Botanically it is Scabiosa and it is sometimes called "Pincushion Flower." It will grow in almost any situation, attaining a height of 1½ to 2 feet and blooming for a long season. The flowers are carried on fine long stems.

Mixed Colors. White, Pink, Scarlet, Crimson, Lavender, and Blackish Maroon. Pkt. 10 cts., ½ oz. 30 cts., oz. 50 cts.

NASTURTIUMS. We know of no flowers that are easier to grow or give more general satisfaction than Nasturtiums. They will thrive on any soil—in fact, they seem to bloom most freely on soil that is only moderately good—and they flower all summer long in all kinds of weather. Sow the seed in April, scattering it sparingly so that no thinning will be required, in drills about an inch deep.

Dwarf Varieties, Fine Mixed Colors. The dwarf or "Tom Thumb" Nasturtiums are fine for beds and edging, any place where masses of color are desired. The plants grow 10 to 12 inches high, rounded and bushy, and covered with flowers from June until frost. The colors range from Straw-Yellow to Deep Orange and from Delicate Rose to Dark Crimson and Maroon, as well as Red and Yellow Bicolors. Pkt. 5 cts., oz. 10 cts., ¼ lb. 30 cts., lb. \$1.

Tall Varieties, Fine Mixed Colors. The tall or climbing Nasturtiums are useful for covering fences and low trellises, or may be allowed to trail over stumps and rockwork. The flowers and leaves are larger than in the dwarf type and the colors are, if possible, even more varied and brilliant. Pkt. 5 cts., oz. 10 cts., ¼ lb. 30 cts., lb. \$1.

NICOTIANA. Fine annuals for the tall border, thriving best on a deep, rich soil. They grow about 2½ feet high, with large, attractive foliage at the base and clusters of delicately fragrant, trumpet-shaped flowers on long stems. It is best to start the seed indoors in March as the young plants are quite tender, but the seed may be sown in fine soil outdoors after all danger from frost is past and the seedlings transplanted when 2 to 3 inches high. Often called "Sweet-scented" or "Flowering Tobacco."

Affinis. A vigorous form which bears quantities of fragrant, blush-white blossoms that open during the early morning and evening. Easy to grow from seed. Pkt. 10 cts., ½ oz. 25 cts., oz. 45 cts.

Sanderæ Hybrids. The flowers are larger than the preceding and come in white and shades of pink and red. Pkt. 10 cts., ½ oz. 40 cts., oz. 75 cts.

NIGELLA. A very interesting and pretty annual, nice for bedding and cutting, easily and quickly grown from seed in any sunny spot. It has finely cut foliage and a curious network of bracts about the flowers, which are followed by odd seed-pods. Sometimes called "Love-in-a-Puff" and "Devil-in-a-Bush." Sow the seed in April or May and thin to stand 8 inches apart. Grows a foot high.

Blue (Miss Jekyll). Fine double azure-blue flowers. Pkt. 10 cts., ½ oz. 30 cts., oz. 50 cts.

White. Flowers pure white. Double. Pkt. 10 cts., ½ oz. 30 cts., oz. 50 cts.



Dwarf Nasturtiums

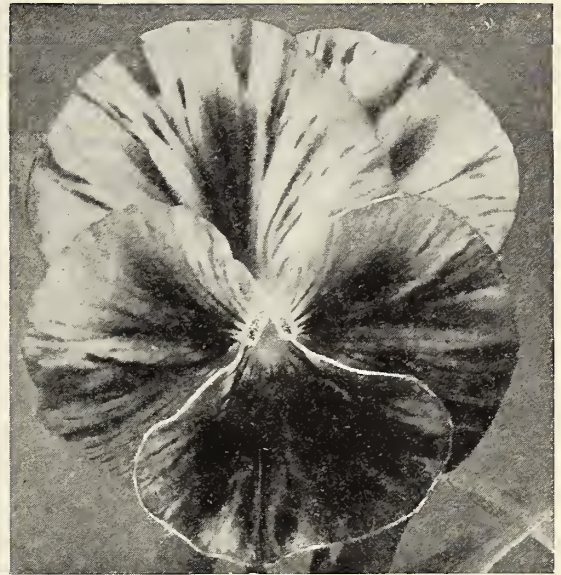
PANSIES

To grow the finest and largest Pansies, remember plants thrive best in cool weather; sow seed at a time that will bring them into bloom very early in the spring or fall. Without a doubt, the best results are secured by sowing in late July or August and protecting the young plants over winter with a covering of strawy manure or a deep blanket of leaves. They will then be ready to begin blooming as soon as the weather opens up in the spring and will continue to flower until hot weather. The next best time to sow is very early in the spring, in February or March, starting the seed in a box indoors or in a coldframe and setting the plants outdoors the latter part of April. Pansies should be given plenty of room, at least 8 inches between plants, and good cultivation, also a liberal supply of water during dry weather. If set out in a spot that is shaded part of the day, where the soil is deep and moist, and the flowers picked daily, the plants may be kept blooming all summer, but the flowers will always run small in hot weather. Fall-blooming plants are secured by sowing in a cool, shaded spot in June or early July.

Fine Mixed Colors. A splendid assortment of select English, French, and American varieties for bedding, including many bright and beautiful colors. Pkt. 10 cts., ½oz. \$1.50, oz. \$2.50.

Cassier's Giants. A famous French strain of very large-flowered Pansies, all of them of the popular "faced" or blotched type. The colors and markings are gorgeous. The plants are vigorous and carry their flowers erect on long, strong stems. Pkt. 20 cts., ½oz. \$4, oz. \$7.

Steele's Mastodons. This is a fine American selection which produces the largest Pansies of all, the flowers often measuring 2 ½ inches in diameter. The plants are large and sturdy and exceptionally free-blooming. The colors are magnificent, including many fine reds and purples. An ideal strain for florists' use as well as home-gardens. Pkt. 20 cts., ½oz. \$4, oz. \$7.



Steele's Mastodon Pansy

PERENNIAL PEAS.

Hardy climbers, attaining a height of 5 to 6 feet each season and living from year to year. They bear quantities of flowers that resemble the old-fashioned Sweet Peas except that they have no fragrance. They grow well on stone walls, fences, and low trellises. Sow any time from May to August.

Mixed Colors. Including Red, Rose, and White. Pkt. 10 cts., ½oz. 40 cts., oz. 75 cts.



Petunias

PETUNIAS

For solid beds of color, borders and edging, vases and porch-boxes; in fact for every purpose except cutting, the Petunias are surpassed by few if any of the easily grown garden annuals. They come into bloom early and continue to flower profusely all summer long, thriving on poor soil and in the hottest weather. Sow the seed in April or May, scattering it thinly on fine sifted soil and, instead of covering it, press it firmly into contact with the earth with a smooth board. When the seedlings are about 2 inches high, transplant them to the place where you want them to bloom, spacing them 6 to 12 inches apart, according to variety. For extra-early flowers start the seed in a box indoors or in a coldframe in March.

Dwarf Inimitable. Round, bushy plants growing about 7 inches high, covered with single flowers of maroon, crimson, and rose, all striped or starred

with pink or white. Very free-blooming and fine for low beds and edging. Pkt. 10 cts., ½oz. 75 cts., oz. \$1.25.

Rosy Morn. The most popular bedding Petunia. Vigorous plants, 10 inches tall, compact and free-flowering. Flowers soft carmine-pink with white throat. Pkt. 10 cts., ½oz. \$1.25, oz. \$2.

Single Varieties, Fine Mixed. A splendid assortment of Petunias for bedding, including many fine colors. Pkt. 10 cts., ½oz. 75 cts., oz. \$1.25.

Double Fringed, Mixed. A magnificent strain produced by careful hand hybridizing. The flowers are large and have beautifully frilled and crinkled petals. A large percentage will come double. These Petunias make splendid pot plants. Pkt. 50 cts.

New Fringed Petunias from Oregon

These fine new strains of giant-flowered fringed Petunias were originated by a famous American Petunia specialist. The plants are robust and free-blooming, desirable for every purpose. Beds all of one color are most effective.

White Beauty. Snowy white.

Pink Beauty. Clear light pink.

Pride of Portland. Deep glowing rose.

Scarlet Beauty. Crimson-scarlet.

Elk's Pride. Violet-purple; large and usually plain edged instead of fringed.

Above varieties, each, pkt. 25 cts.

Ruffled Giants, Mixed Colors. Immense single flowers with ruffled and fringed petals, in all colors. Pkt. 25 cts.



Phlox Drummondii. See page 40

ANNUAL PHLOX, DRUMMONDII. Blooming in mid-summer, these easily grown flowers make the most brilliant of beds. They prefer an open, sunny situation, but are not particular as to soil and will give good results under almost any conditions. Sow the seed in April or early May and thin the plants to stand about 4 inches apart. For extra-early flowers start the seed in hotbed or coldframe.

Tall Finest Mixed. A gorgeous variety of colors, including Primrose White, Pink, Carmine, Blood-Red, Violet, etc., many with distinct white centers. About 15 inches tall. Pkt. 10 cts., ½oz. 75 cts., oz. \$1.25.

Dwarf Compact Mixed. These grow about 8 inches high and quite bushy, making fine borders and ribbon beds. Pkt. 10 cts., ½oz. \$1.25, oz. \$2.

HARDY PHLOX. Perennial, producing large heads of brilliantly colored flowers of many shades. 2 to 4 feet high. Pkt. 10 cts., ½oz. \$2, oz. \$4.

ANNUAL PINKS. The annual Chinese or Japanese Pinks are very thrifty and attractive garden flowers, coming in a wide assortment of forms and colors, and succeeding on any garden soil. They are nice for cutting. Seed sown in April will give blooming plants early in July.

Japanese Single Mixed. An improved strain, producing large, fringed, brightly colored flowers. Pkt. 10 cts., ½oz. 30 cts., oz. 50 cts.

Chinese, or Indian Double Mixed. These double forms resemble carnations but they come in a remarkable variety of colors, including many flowers with distinct stripes and borders. Pkt. 10 cts., ½oz. 40 cts., oz. 75 cts.

PERENNIAL GRASS PINKS. The Pheasant-Eye, Grass or Clove Pink of the old-fashioned garden, or *Dianthus plumarius* of the botanist, is one of the most pleasing of our low-growing hardy perennials. The plants grow 8 to 10 inches high, with grass-like foliage, and produce in early spring quantities of fringed white or light pink flowers with crimson centers, distinctly clove-scented. On deep, moist soil they will live and increase from year to year with almost no care. Easily grown from seed, sown any time from April to August. Pkt. 10 cts., ½oz. 40 cts., oz. 75 cts.

POPPIES. Although the Poppies last for only a short time, while they are in bloom no flowers can rival them in brilliant colors. The seed is fine and should be scattered thinly in the place where the plants are wanted to bloom, as they do not transplant well. Thin if necessary to give each plant room to develop. Sow the annual sorts in April and the perennial kinds June to September. Require plenty of space.

Shirley, Mixed Colors. Probably the finest strain of annual, single-flowered Poppies. They grow 12 to 15 inches tall and the flowers range in color from white and pale pink to bright scarlet and deep crimson, including rose with white edge, red with white edge, etc. Very showy. Pkt. 10 cts., ½oz. 30 cts., oz. 50 cts.

The Tulip Poppy. The brightest color in annual Poppies. Vivid scarlet flowers somewhat resembling a big Tulip; bluish foliage. Pkt. 10 cts., ½oz. 30 cts., oz. 50 cts.



Portulaca border



Shirley Poppies

Poppy, Double-flowered, Mixed Colors. Big, shaggy, ball-shaped flowers on 2-foot stems, including all of the ordinary Poppy colors, as well as Mauve, Purple, Maroon, etc. Extra-fine. Pkt. 10 cts., ½oz. 20 cts., oz. 35 cts.

Iceland Poppies. A hardy perennial strain, growing about a foot high, with very pretty, single flowers in White, Salmon, Yellow, and Orange, the petals crinkled like crepe paper. This strain is nice for cutting as the flowers last quite well in water. Pkt. 10 cts., ½oz. 40 cts., oz. 75 cts.

Orientele. The big, bright scarlet, Decoration Day Poppy. A hardy perennial form bearing immense single flowers in spring. It should be in every garden. Pkt. 10c., ½oz. 40c., oz. 75c.

PORTULACA. The Portulacas will grow on soil too poor and in places too hot and sunny for any other flower. The plants are low and spreading, commencing to bloom in July and blooming profusely all summer. Sow the seed in late April or May and thin the plants to stand 6 to 8 inches apart. The plants may be moved when in full bloom.

Single, Mixed Colors. Includes White, Yellow, Orange, Pink, Carmine, Scarlet, etc. Very bright and attractive. Pkt. 5 cts., ½oz. 60 cts., oz. \$1.

Double, Mixed Colors. The flowers resemble miniature roses. All colors. Pkt. 10 cts., ½oz. \$1.75, oz. \$3.

HARDY PRIMROSES. These are fine free-blooming flowers for the rockery and perennial borders. They seem to do best in dry soil and will stand some shade. Sow the seed inside in February or early March and transplant to the open ground in April. Give the plants light protection over winter for the first year or two.

Finest Mixed Colors. Many shades and colors, the majority with distinct "eyes" or centers. Pkt. 10 cts.

PYRETHRUM. Hardy perennial plants very easy to grow from seed sown any time from early spring to late summer. Seed started under glass in February will give blooming plants the first summer. By cutting off the first crop of flowers a second crop will be produced in the fall.

Double White, or Feverfew. Ball-shaped, creamy white flowers that are fine for cutting and make a splendid showing in the garden. Pkt. 10 cts., ½oz. 25 cts., oz. 45 cts.

Golden Feather. Grown mostly for its showy golden yellow laciniated foliage. Nice for borders. Pkt. 10 cts., ½oz. 25 cts., oz. 45 cts.

RHODANTHE. One of the so-called "Everlastings" that can be dried in its natural colors for winter bouquets. It is an easily grown annual, about 1½ feet tall, with silvery gray leaves and very pretty, little, double flowers.

Mixed Colors. White, Pink, and Crimson. Pkt. 10 cts., ½oz. 40 cts., oz. 75 cts.



Salvia

plants are established, and blooming profusely from June until killed by frost. Start the seed indoors or in hotbeds very early, during January or February if possible. Give the seedlings plenty of light, warmth, and water, and when they are 2 to 3 inches high transplant them into small pots or space them out to stand 6 inches apart. Transplant them to the garden in late May, giving them a sunny location and rich, deeply dug soil if possible, setting the plants at least 1½ feet apart.

Splendens. The original Scarlet Sage. It grows about 2 feet tall and is covered with large, bright red blossoms all summer long. Pkt. 10 cts., ½oz. \$1.75, oz. \$3.

Bonfire. A select strain, fine for mass planting, as it is very compact in growth and has exceedingly brilliant extra-large flowers. Pkt. 10 cts., ½oz. \$2, oz. \$3.50.

America. Considered to be the finest of all, particularly for low beds and borders as it grows only about 1½ feet tall. It is an exceptionally profuse and constant bloomer, the plants a mass of light blazing scarlet. Pkt. 10 cts., ½oz. \$3, oz. \$5.

SNAPDRAGONS. Free-blooming garden favorites, of the easiest culture, seeming to thrive best on poor soil and producing their beautiful flowers all summer long. Sow the seed in the garden in April and when the plants are 2 to 3 inches high, thin or transplant them to stand 10 to 12 inches apart. Early spring flowers may be secured by sowing in July or August and protecting the plants over winter like pansies, or they may be cut back and potted up in the fall to bloom indoors. No flower-garden is complete without at least a few of these handsome flowers.

Large-flowering Half-Dwarf Varieties, Mixed. These are the best sorts for outdoor bedding and nice for cutting. They grow about 15 inches tall and the flowers come in a great wealth of beautiful colors, including all shades of Pink, Salmon, Mauve, Orange, Red, White, and Yellow. Pkt. 10 cts., ½oz. 30 cts., oz. 50 cts.



Snapdragons

SALPIGLOSSIS. A popular, easily grown garden annual, richly colored and fine for cutting. The flowers are borne in clusters at the top of long stems and are produced very freely from midsummer to fall. Sow the seed in late April or May and thin the plants to stand about 10 inches apart.

Dwarf Varieties, Finest Mixed Colors. These grow about 2 feet tall. The flowers range from White, Rose and Pale Blue to Deep Red and Violet, beautifully penciled with gold on the petals and with darker shadings in the throat. Pkt. 10 cts., ½oz. 60 cts., oz. \$1.

SALVIA. The Scarlet Salvia, or Flowering Sage, makes the most gorgeous masses of flaming red found in all nature. For formal beds, for grouping in front of porches and for similar purposes, it is exceedingly popular, requiring little care after the

SENSITIVE PLANT. The Sensitive Plant, or *Mimosa pudica*, gets its name from its interesting habit of closing its leaves at the slightest touch. Sow the seed in the house in March and transplant to the open ground late in May. Pkt. 10 cts., ½oz. 30 cts., oz. 50 cts.

STOCKS. The old-fashioned Ten Weeks Stocks are beautiful, free-flowering, sweet-scented annuals, requiring a mellow soil but otherwise very easy to grow. Sow the seed in April or May and give the plants 12 to 15 inches of space. They may be potted up in the fall and will bloom almost as freely in the house as out-of-doors.

Dwarf German. A vigorous garden strain that grows about 1 foot high and sends up quantities of heavy spikes crowded with blossoms, many double, in a great range of delicate colors. Very sweet-scented and splendid for cutting. Pkt. 10 cts., ½oz. \$1.25, oz. \$2.25.

SUNFLOWERS. The garden Sunflowers are quite different from the ordinary field type. They are vigorous annuals, thriving even on poor soil, providing they receive plenty of sunlight. Sow the seed in April or May and give the plants plenty of room. They are fine for massive border and back-ground plantings.

Golden Chrysanthemum-flowered. Strong plants, growing 4 to 5 feet high, with many branches bearing big, double, globular flowers like chrysanthemums, of the purest golden yellow. The stems are long and stiff making the flowers ideal for cutting for massive decorations. Pkt. 10 cts., ½oz. 30 cts., oz. 50 cts.

Miniature (Cucumerifolius). Bushy plants about 4 feet tall, loaded with comparatively small, single flowers, bright yellow with dark brown centers. Fine for cutting as well as display in the garden. Pkt. 10 cts., ½oz. 30 cts., oz. 50 cts.

Red. An attractive hybrid strain that bears large single or semi-double flowers ranging in color from pink to deep purplish red and mahogany. Pkt. 10 cts., ½oz. 40 cts., oz. 75 cts.



Sweet Williams

SWEET WILLIAM. Hardy, thrifty perennials, great favorites in all gardens; easily grown from seed. The flowers are borne in large trusses and are delightfully fragrant. Sow any time from early spring to July. The plants should stand at least 8 inches apart.

Single Varieties, Mixed Colors. White, Pink, Red, Dark Crimson and other colors, many with distinct "eyes" or margins of a different shade. Pkt. 10 cts., ½oz. 30 cts., oz. 50 cts.

Double Varieties, Mixed Colors. The double flowers are very attractive in form as well as colors. Pkt. 10 cts., ½oz. 50 cts., oz. 90 cts.



Mary Pickford Sweet Peas

GRANDIFLORA SWEET PEAS

These are the old-fashioned Sweet Peas, not so large or delicately formed as the Spencers, but more profuse in bloom.

	Oz.	¼lb.	Lb.
America. Bright red and white striped.....	\$0 10	\$0 35	\$1 25
Countess of Radnor. Lavender....	10	35	1 25
Dorothy Eckford. Large; pure white.....	10	35	1 25
Hon. Mrs. E. Kenyon. Large; primrose.....	10	35	1 25
Janet Scott. Bright pink and buff..	10	35	1 25
King Edward VII. Bright red.....	10	35	1 25
Lady Grisel Hamilton. Lavender..	10	35	1 25
Lord Nelson. Deep navy-blue.....	10	35	1 25
Miss Willmott. Orange-pink.....	10	35	1 25
Mrs. Collier. Primrose.....	10	35	1 25
Mrs. Walter Knight. Rose-purple.	10	35	1 25
Navy-Blue. Indigo-blue and violet.	10	35	1 25
Othello. Deep maroon.....	10	35	1 25
Prima Donna. Fine pink.....	10	35	1 25
Queen Alexandra. Scarlet.....	10	35	1 25
Eckford's Finest Mixture. The best of the Grandiflora varieties, in all colors.....	10	30	1 00

SWEET PEAS

Success with Sweet Peas in our climate depends largely on getting an early start in order that the vines may make their growth and commence to bloom before hot weather. Some people always sow their Sweet Peas on St. Patrick's Day; others believe in sowing on Good Friday; but the point is that the seed can and should be sown just as early in the spring as the ground can be put in shape to receive it. Next in importance is the insuring of a plentiful supply of moisture and fertility about the roots; this is accomplished by digging a trench a foot or more deep and then refilling it to within 6 inches of the top with loose soil mixed with a fair quantity of manure, compost, or other humus material if the soil be poor, and with a scattering of lime or wood-ashes to correct any acid condition. Sow the seeds on top of this layer, spacing them 1 to 2 inches apart, and cover with an inch of soil. As the plants grow, fill in the trench around them until the level of the surface is reached. By this method the roots will be deep enough so that they will not be seriously affected by hot, dry weather. Thin out, if necessary, so as to leave 4 to 6 inches between plants, and support the vines with brush, netting or strings.

Sweet Peas bloom best in an open, sunny situation. Keeping the flowers picked as fast as they open prolongs the period of bloom. The old-fashioned or Grandiflora type of Sweet Peas are hardy and very floriferous and the flowers are heavily scented, although of only medium size and rather stiff in form. The new Spencer or waved Sweet Peas are much larger and finer in form as well as colors, but not quite so free-blooming. Modern gardeners and florists as a rule grow only the Spencer varieties. Use Farmogerm on Sweet Peas. See page 63.

NEW SPENCER SWEET PEA MARY PICKFORD

Mere cold words may possibly do justice to some varieties of Sweet Peas—all the writer need do is to give the color. But with this new variety, which has been christened **Mary Pickford**, the task is far more difficult. The color is the most dainty shade of cream-pink imaginable; now and then a trace of salmon seems to flush the petals, giving a little stronger tone to the pink tint. Standard and wings are waved, and the spray of four flowers is carried on a long stem. Pkt. 15 cts., oz. \$1, ¼lb. \$3, lb. \$10.

SPENCER SWEET PEAS

Distinguished by giant size, often measuring 2 inches in diameter, and by beautifully waved petals. Hundreds of varieties are known to specialists and new sorts are being constantly produced by English and American breeders, but we believe that the varieties we offer comprise the best and most satisfactory of the new as well as old, in all of the favorite colors.

	Pkt.	Oz.	¼lb.	Lb.
Asta Ohn. Pinkish lavender.....	\$0 10	\$0 30	\$1 00	\$3 00
Countess Spencer. Rose-pink.....	10	30	1 00	3 00
Crimson King. Rich ox-blood-crimson.	10	30	1 00	3 00
Elfrida Pearson. Giant shell-pink.....	10	30	1 00	3 00
Etta Dyke. Giant pure white.....	10	30	1 00	3 00
Fiery Cross. Bright orange-scarlet.....	10	30	1 00	3 00
King Edward. The best deep red.....	10	30	1 00	3 00
Margaret Atlee. Rich cream-pink.....	10	30	1 00	3 00
Miss California. Beautiful orange-salmon and cream-pink.....	10	60	2 00	6 00
New Miriam Beaver. Light apricot-buff-pink.....	10	30	1 00	3 00
Othello Spencer. Dark chocolate-maroon.....	10	30	1 00	3 00
Primrose Spencer. Pale creamy yellow..	10	30	1 00	3 00
Royal Purple. Immense bright purple...	10	30	1 00	3 00
Wedgwood. Fine clear blue.....	10	30	1 00	3 00
Scott's Finest Mixed Spencers.....	10	25	75	2 50



Mammoth Verbenas

THUNBERGIA. A slender climbing or trailing annual with many little flowers, varying from palest primrose to deep buff-yellow, all with dark centers, from which it derives its common name, "Black-eyed Susan." It is fine for low trellises and for trailing over the edges of porch-boxes and vases. Sow the seed in May, after danger from frost is past, or, if early flowers are wanted, start indoors in February or March. Thunbergia may also be grown in the greenhouse at any time of year. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts.

VERBENA. Low, spreading plants with handsome dark green foliage and great clusters of sweet-scented flowers all summer long. Old favorites for low beds and edging, also for boxes and vases. Sow indoors in February or March and transplant to the garden in May, spacing the plants 15 inches apart. The seed may also be sown directly in the open ground early in May. A dry, sunny location seems to suit them best.

Mammoth Hybrids. These varieties produce extra-large flower-heads with individual florets often measuring an inch or more in diameter. **Red, White, Blue, or Pink,** in separate colors or Mixed. Pkt. 10 cts., $\frac{1}{2}$ oz. 60 cts., oz. \$1.

Choice Mixed. This contains a great variety of colors including many striped and "eyed," as well as self-colored sorts, but not so large as the preceding. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts.

VINCA. This tender perennial is better known as Madagascar Periwinkle and will bloom the first year if seed is sown early. It forms handsome, bushy bedding plants that bloom profusely all summer from seed sown indoors in February or March, and is fine for pot culture. The plants grow to a height of 1 to 1½ feet.

Choice Mixed. An excellent assortment of Red, White with Rose center, Pure White, and Pink. Pkt. 10 cts.

Our Nursery Department

See pages 49 to 57

We furnish high grade stock of *Roses, Climbing Vines, Hardy Perennials, Perennial Phlox, Peonies, and Shrubs.* All of our stock is No. 1 grade and will be delivered to our customers in the best possible condition.

WALLFLOWER. The Wallflowers are perennials but in our rigorous climate they require protection over winter and are best carried over in a coldframe. They grow best in a deep, moist soil. Sow the seed indoors in March or outdoors late in May and space the plants about 8 inches apart. The flowers are clustered on spikes 1½ feet tall, and are very fragrant.

Single Varieties, Mixed Colors. Artistic shades of coppery, red, bright brown, bronzy yellow, etc. Pkt. 10 cts., $\frac{1}{2}$ oz. 40 cts., oz. 75 cts.

WILD CUCUMBER. A very rapid-growing, vigorous climber, often running 30 to 40 feet in a season. It bears small, white, slightly fragrant flowers, followed by spiny seed-pods. Fine for covering fences, banks, and unsightly objects. Pkt. 10 cts., $\frac{1}{2}$ oz. 20 cts., oz. 35 cts.

ZINNIAS. The recent improvements in these old-fashioned garden annuals have made them more popular than ever. Few flowers provide a more gorgeous display with less care or attention; all they require is a sunny spot to cause them to grow and bloom vigorously from early summer until frost. The seed may be sown in the garden any time during April or May and the plants thinned or transplanted to stand 8 to 18 inches apart, according to variety. The largest specimen blooms are produced on plants that are grown on a mellow, moderately rich soil and given ample room to develop. If broad, bushy plants are desired, pinch out the top buds when about 15 inches tall.

Mammoth Dahlia-flowered Mixed. The newest and largest of the Zinnias, with very deep, double flowers made up of numberless, small, silky petals. This mixture includes a number of novel and most attractive colors besides all the usual Zinnia shades. Pkt. 10 cts., $\frac{1}{2}$ oz. 75 cts., oz. \$1.25.

Scott's Double Giants. Next to the new Dahlia-flowered class, these are the tallest and largest of the Zinnias and constitute a great improvement over the old types. The plants grow 2½ feet tall and bear immense, double blooms often 5 inches in diameter. **Pure White, Clear Yellow, Rose-Pink, Bright Scarlet, Deep Crimson, or Purple,** in separate colors or Mixed. Each, pkt. 10 cts., $\frac{1}{2}$ oz. 75 cts., oz. \$1.25.

Elegans, Tall Varieties, Mixed. The type most commonly grown. Pkt. 5 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.

Elegans, Dwarf Varieties, Mixed. Pkt. 5 cts., $\frac{1}{2}$ oz. 30 cts., oz. 50 cts.



Scott's Double Giant Zinnia

LAWN GRASS SEEDS



For Your Lawn—Start with Good Seed

The first and most important requirement for a smooth, lasting green lawn is pure, vigorous seed of the most suitable varieties of grass. No one kind of grass will meet all the varying conditions of climate and soil. For best results it is necessary to sow a mixture of different sorts, but to avoid trouble with weeds and have a solid green lawn at all times and under all conditions, such a mixture must be composed of the right kinds of grass in the right proportions.

The **Scott Lawn Grass Mixtures** are made of the best re-cleaned American and European grass seeds it is possible to procure. They contain no "fillers," such as unhulled Red Top, light-weight Blue Grass, etc., and they are as free from weeds as the most modern and careful methods of harvesting and cleaning can make them. They have been used in making thousands of fine lawns. Better lawn grass mixtures cannot be made.

SCOTT'S "PURITY" LAWN GRASS SEED

This is an extra-fine mixture of re-cleaned Grass Seeds of the varieties that are best adapted to general lawn sowing. In making up this mixture it was our aim to make a formula that would produce a durable and lasting lawn, withstanding the extreme heat of the summer, the cold and frost of winter, as well as periods of drought and moisture that mark our Pennsylvania climate. We believe the testimony of our customers will prove that we have succeeded in our efforts, and a lawn that is sown with our Lawn Grass Mixture will show a rich, velvety appearance in five to six weeks after sowing. A measured bushel will weigh about twenty-seven pounds; about 75 pounds will be required to seed an acre of lawn. About ten pounds will be required for an average city lot, measuring 30 by 100 feet; this will give a good liberal seeding. **Less than 10 lbs., 45 cts. per lb.; 10 lbs. \$4; 25 lbs. and over, 35 cts. per lb.** If wanted by mail, add postage at your zone rate, according to the table on inside of front cover. Special prices will be quoted on large quantities.

Shady Lawn Mixture. This mixture is made from Grasses which will thrive under the shade of trees and buildings, where comparatively little sun reaches the ground, and in places where ordinary Grasses will not succeed. The quantity of seed required for sowing is practically the same as for our Lawn Grass Mixture. **Less than 10 lbs., 55 cts. per lb., 10 lbs. and over, 50 cts. per lb.** If wanted by mail, add postage at your zone rate, according to the table on inside of front cover.

Putting-Green Mixture. Our Putting-Green Mixture is made from selected stocks of those European and American Grasses which have proved the best for the purpose. As we import large quantities of Grasses, we are well equipped for preparing special Golf-Course Mixtures. **Less than 10 lbs., 55 cts. per lb.; 10 lbs. and over, 50 cts. per lb.** If wanted by mail, add postage at your zone rate, according to the table on inside of front cover.

The Pennsylvania Seed Law requires that every package of lawn grass or other grass seed mixtures offered for sale, weighing 8 ounces or more, shall bear a label giving the names of the different varieties of grasses composing the mixture, the percentage of weed seeds, and the percentage of inert matter. Jobbers of cheap, low-grade lawn seed mixtures avoid the labeling law by putting their mixtures up in packages containing less than 8 ounces. These mixtures generally contain a high percentage of chaff and dirt, and many kinds of weed seeds, and are made up quite largely of grasses entirely unsuited for lawn purposes. Scott's Lawn Grass Seeds are always fully and accurately labeled. This information is important to you and you should insist on getting it when buying Lawn Seed.

PURE SEEDS GIVE BEST RESULTS

SUMMER-FLOWERING BULBS



Caladium Esculentum

	Each	Doz.	100
5 to 7 inches circumference.....	\$0 10	\$1 00	\$7 00
7 to 9 inches circumference.....	12	1 25	9 00
9 to 11 inches circumference.....	20	2 00	14 00

If wanted by mail, add for postage, 6 cts. per doz. for 5-7- and 7-9-in. bulbs, 15 cts. per doz. for 9-11-in. bulbs, and 25 cts. per doz. for 11-13- and 13-15-in. bulbs

Caladium Esculentum

(Elephant's Ear)

For imposing masses of tropical foliage there is nothing so effective or so easily grown as the Elephant's Ear. The plants grow from 3 to 5 feet high, with enormous bright green leaves, veined with lighter green, broad and thick and bearing a decided resemblance to elephant's ears, whence the popular name. They thrive best in a moist, rich soil but can be grown in almost any situation. Plant the bulbs late in May, after all danger from frost is past, spacing them 2 to 4 feet apart and covering them a few inches deep. The larger the bulb, the larger the plant and the more space required. If extra-large plants are desired, start the bulbs indoors in pots or large boxes, in March or early April, and transplant to the open about June 1. Give plenty of water throughout the season; liquid manure is very beneficial. The bulbs may be carried over winter by digging them up after frost has killed the leaves, drying them in the sun, and then storing in boxes with sand or dry soil in a frost-proof cellar.

	Each	Doz.	100
11 to 13 inches circumference.....	\$0 40	\$3 50	\$25 00
13 to 15 inches circumference.....	50	5 00	40 00

TUBEROSE

Old-fashioned flowers valued for their fragrance. Start the bulbs indoors in March and transplant to the open in early May.

WHITE PEARL. The best variety. Flowers creamy white, large, and double.
First-Size Bulbs. 6 cts. each, 70 cts. per doz., \$4.50 per 100. If wanted by mail, add 10 cts. per doz. extra.

Mammoth Bulbs. 9 cts. each, 85 cts. per doz., \$6 per 100. If wanted by mail, add 12 cts. per doz. extra.

MADEIRA VINE

A rapid-growing climber which will quickly cover porch trellises, arbors, stumps, etc. Foliage light green; flowers white, small and feathery; sometimes called "Climbing Mignonette"; delightfully fragrant. Plant the roots in May. Give light protection over the roots during winter.

Large Roots. 10 cts. each, \$1 per doz., \$7 per 100. If wanted by mail, add 8 cts. per doz. extra.

CINNAMON VINE

A long-lived, vigorous climber with broad heart-shaped leaves and clusters of white, cinnamon-scented flowers. Dies down to the ground each winter but comes up again very quickly in the spring. 8 cts. each, 75 cts. per doz., \$6 per 100. If wanted by mail, add 8 cts. per doz. extra.

HARDY LILIES

Auratum (Gold Banded). White with crimson spots and golden stripes. 40 cts. each, \$4 per doz.

Album. Pure white. 40 cts. each, \$4 per doz.

Rubrum. White, shaded with deep rose and spotted red. 40 cts. each, \$4 per doz.

If wanted by mail add 5 cts. each or 15 cts. per doz.



Lilium auratum

Our Nursery Department

See pages 49 to 57

We furnish high grade stock of *Roses, Climbing Vines, Hardy Perennials, Perennial Phlox, Peonies, and Shrubs*. All of our stock is No. 1 grade and will be delivered to our customers in the best possible condition.

CANNAS

The modern Cannas with their splendid foliage and large, gorgeously colored flowers surpass all other plants for massive beds and heavy borders. They are very easy to grow, thriving best in a sunny, well-drained spot. For extra-large plants and heavy foliage effects, the soil should be well manured. Dig the bed deep and plant the roots after the middle of May, setting them about 4 inches below the surface and 1½ to 2 feet apart, depending on variety, the tall sorts requiring more space than the dwarf. The plants will bloom continuously from July until frost. If the roots are started in March in pots or boxes of sandy soil placed in a sunny window and given plenty of water, the plants will be several inches high when it is time to set them outdoors, and they will come into bloom a month to six weeks sooner.

If wanted by mail, add 10 cts. per doz. to the following prices

Alphonse Bouvier. A popular bedding variety, with green leaves and bright crimson flowers. Height 4½ feet. 8 cts. each, 90 cts. per doz., \$6 per 100.

Charles Henderson. A profuse bloomer, compact in growth, with green foliage and scarlet flowers, flamed with yellow in the throat. Height 3½ feet. 8 cts. each, 90 cts. per doz., \$6 per 100.

City of Portland. Clear glowing rosy pink flowers of unusually large size; broad, rich green leaves. Wonderfully effective and the best Canna of its color. Height 3½ feet. 10 cts. each, \$1 per doz., \$7 per 100.

Crimson Bedder. Foliage dark green; flowers deep blood-red. Height 3 feet. 8 cts. each, 90 cts. per doz., \$6 per 100.

Egandale. One of the best bedders; an early and constant bloomer, with deep currant-red flowers of a unique and very pleasing shade and rich bronzy green leaves. Height 3½ feet. 8 cts. each, 90 cts. per doz., \$6 per 100.



Canna



Bed of Cannas

Fiery Cross. A famous variety, with big, substantial carmine-red flowers and beautiful bluish green foliage. A constant bloomer. Height 4 feet. 12 cts. each, \$1.25 per doz., \$9 per 100.

Florence Vaughan. A favorite bedding Canna. Flowers yellow with red spots; leaves light green. Height 4½ feet. 8 cts. each, 90 cts. per doz., \$6 per 100.

Gladiator. Bright golden yellow flowers, freely dotted with crimson; foliage broad and bright green; a most effective bedder. Height 4½ feet. 8 cts. each, 90 cts. per doz., \$6 per 100.

Golden Gate. The brightest of the yellow sorts, opening pure golden yellow but becoming suffused and striped in the center with crimson and apricot as the flower develops. Leaves bright green. Height 4 feet. 10 cts. each, \$1 per doz., \$7 per 100.

King Humbert. Undoubtedly the most popular Canna in cultivation and, on account of its rich purplish bronze foliage, one of the most handsome and conspicuous. Flowers orange-scarlet, freely produced for a long season. Height 4½ feet. 10 cts. each, \$1 per doz., \$7 per 100.

Meteor. One of the finest tall-growing Cannas. The broad-petaled flowers are dazzling crimson and are carried in big clusters. Foliage deep green. Vigorous and blooms for a long season. Height 5 feet. 10 cts. each, \$1 per doz., \$7 per 100.

Panama. Large, broad-petaled flowers, orange-red with a distinct border of golden yellow; green foliage. A very effective bedder. Height 3 feet. 10 cts. each, \$1 per doz., \$7 per 100.

Pennsylvania. Large orchid-flowered scarlet, overlaid with orange. Height 6 feet. 8 cts. each, 90 cts. per doz., \$6 per 100.

Queen Charlotte. Rich pomegranate-red, bordered with yellow. Dwarf and small-flowered but exceptionally free-blooming. Fine for borders. Height 2½ feet. 8 cts. each, 90 cts. per doz., \$6 per 100.

Shenandoah. Flowers salmon-pink borne in large clusters; foliage rich ruby-red. Height 4 feet. 10 cts. each, \$1 per doz., \$7 per 100.

Statue of Liberty. Flowers blazing flame-red. The foliage is of a rich, luxuriant bronzy shade. The leaves are larger than any Canna we know, Height 6 to 7 feet. 10 cts. each, \$1 per doz., \$7 per 100.

The President. The finest red Canna in existence and considered by many growers to be the most valuable Canna of any color ever introduced. Enormous glowing scarlet flowers of wonderful substance borne erect on strong stems; luxuriant deep green foliage. Blooms continuously from midsummer until frost. Height 4 ft. 12 cts. each, \$1.25 per doz., \$9 per 100.

Venus. A gay rosy pink, with a well-defined border of creamy yellow. Height 4 feet. 8 cts. each, 90 cts. per doz., \$6 per 100.

Winter's Colossal. Remarkable for its exceptionally large, broad-petaled flowers, often measuring 8 inches across. Deep scarlet with light green foliage. Height 5 feet. 10 cts. each, \$1 per doz., \$7 per 100.

Yellow King Humbert. A large-flowered yellow variety, popular for tall beds. Flowers deep yellow, blotched with red; leaves dark green. Height 5 feet. 10 cts. each, \$1 per doz., \$7 per 100.

BULBS FOR FALL PLANTING

Tulips, Hyacinths, Narcissus, Crocus, and others. Our catalogue will be ready about September 1. Write for it.

GLADIOLUS

There are few flowers to compare with the Gladiolus for all-round usefulness in the home-garden—and few flowers are more lovely or easier to grow. Their graceful form, attractive colors, and characteristic markings have given them the popular name of "Garden Orchids." Any ordinary garden soil will grow fine Gladiolus, providing they receive plenty of sunlight. Plant the bulbs any time after mid-April up to the end of June, setting them about 4 inches deep and 6 inches apart. The fine improved sorts we offer make ideal cut-flowers. If cut when the first one or two flowers have opened and kept supplied with fresh water, the remaining flowers will open and the spikes will last for over a week. For a constant supply of flowers for cutting from August to frost, make plantings every week or ten days during the spring. The bulbs may be dug in the fall before the ground freezes and stored over winter in dry, cool, but frost-proof places.

If wanted by mail, add 8 cts. per dozen for postage

- Alice Tiplady.** Bright saffron-orange; large, open flowers on strong, stiff stems. 10 cts. each, \$1 per doz., \$7 per 100.
- Anna Eberius.** Large spike of velvety purple flowers. Extra fine. 9 cts. each, 90 cts. per doz., \$6 per 100.
- Baron Hulot.** The nearest to blue of any of the Gladiolus. The flowers are of medium size and deep violet-blue in color; spikes long and graceful. 10 cts. each, \$1 per doz., \$7 per 100.
- Crimson Glow.** Very fine large crimson flowers in big spikes. 10 cts. each, \$1 per doz., \$7 per 100.
- E. J. Shaylor.** Splendid deep rose-pink. One of Kunderd's best ruffled varieties. 9 cts. each, 90 cts. per doz., \$6 per 100.
- Empress of India.** Large flowers of an unusual color. Deep velvety brownish maroon. 10 cts. each, \$1 per doz., \$7 per 100.
- Evelyn Kirtland.** A beautiful rosy pink, shading to darker at the edges. 10 cts. each, \$1 per doz., \$7 per 100.
- Flora.** Golden yellow. Similar to Schwaben, but a better color. 10 cts. each, \$1 per doz., \$7 per 100.
- Golden Measure.** Pure golden yellow; very large flowers. Robust grower. 15 cts. each, \$1.50 per doz., \$10 per 100.
- Halley.** A quick, vigorous grower, always one of the first to bloom. Long spikes of delicate salmon-pink flowers. 9 cts. each, 90 cts. per doz., \$6 per 100.
- Herada.** A tall, giant-flowered Gladiolus with fine mauve-colored flowers. Unusual and most attractive. 12 cts. each, \$1.25 per doz., \$9 per 100.
- L'Immaculee.** Large pure white blooms. One of the best pure whites. 10 cts. each, \$1 per doz., \$7 per 100.
- La Marechal Foch.** Beautiful delicate pink, large flowers. 10 cts. each, \$1 per doz., \$7 per 100.
- Lovesfire.** Very large, wide-spreading flowers of brilliant scarlet. One of the finest. 12 cts. each, \$1.25 per doz., \$9 per 100.
- Mary Pickford.** Lovely creamy white with soft sulphur-yellow throat. 10 cts. each, \$1 per doz., \$7 per 100.
- Mrs. Dr. Norton.** Silvery white, base tinged with pink. Splendid cut-flower. 10 cts. each, \$1 per doz., \$7 per 100.



Gladiolus



A border planting of the lovely Gladiolus or Garden Orchids

- Mrs. Francis King.** Tall and strong-growing, with flowers of a light, bright shade of scarlet. Fine for mass effects. 6 cts. each, 60 cts. per doz., \$4 per 100.
- Mrs. Frank Pendleton.** Salmon-pink with deeper flush in the throat and distinct maroon blotches on the lower petals. A favorite for cutting. 9 cts. each, 90 cts. per doz., \$6 per 100.
- Panama.** Somewhat resembles America but the flowers are larger and a deeper shade of pink. 10 cts. each, \$1 per doz., \$7 per 100.
- Peace.** Large, white flowers, feathered pale lilac. 9 cts. each, 90 cts. per doz., \$6 per 100.
- Pink Perfection.** Delicate apple-blossom-pink; spikes long and slender. 12 cts. each, \$1.25 per doz., \$9 per 100.
- Schwaben.** Light yellow with blotch of deep carmine in the center. A sturdy grower with large flowers. 10 cts. each, \$1 per doz., \$7 per 100.
- Twilight.** Creamy buff, edges of petals flaked pink. 15 cts. each, \$1.50 per doz., \$10 per 100.
- Willy Wigman.** Soft pink with blood-red blotch in the throat. 10 cts. each, \$1 per doz., \$7 per 100.
- Scott's Finest Mixed.** This splendid mixture is made up of many named Gladiolus, including the finest sorts in our collection as well as other desirable varieties. Large, healthy bulbs, sure to bloom. 6 cts. each, 60 cts. per doz., \$3.50 per 100.

DAHLIAS

It is doubtful if there are any flowers that afford as much general satisfaction as Dahlias. The ease with which they can be grown in any sunny situation, their freedom from pests and blights, their endless variety of color, size, and form, and their great usefulness for cutting as well as garden decoration insure them a permanent place in popular favor, while their low cost makes it easy for everyone to start a collection which can be added to year after year. The roots or tubers should be planted about 4 inches deep in well-dug soil during May or June. Allow at least 2 feet of space between plants. Trim out all but the strongest two or three shoots and when these are about 4 feet high pinch off the tips to encourage branching. If extra-large exhibition blooms are wanted, remove all but one or two of the top buds on each stem. Tall plants should be tied to stakes for support. Dig roots when frost has killed the foliage in the fall, and store in sand or soil in a cool but frost-proof cellar.

If wanted by mail, add 5 cts. each or 25 cts. per doz.

CACTUS DAHLIAS

These are considered by many to be the most attractive of the Dahlias. They are distinguished by narrow, quilled petals which are often curved and twisted in various forms.

Aberdeen. Deep carmine. 30 cts. each, \$3 per doz.

Attraction. Beautiful, having soft silvery mauve-rose blooms, with a white suffusion. 75 cts. each, \$7.50 per doz.

Conowingo. The plants are vigorous and free-blooming. Flowers large, bright yellow, suffused with salmon. 75 cts. each, \$7.50 per doz.

Hollywood. A fine form of flower, large and free, beautiful rich salmon. \$1 each, \$10 per doz.

Judge Offutt. Bright buttercup-yellow, shaded with amber. A strong grower and free bloomer. 50 cts. each, \$5 per doz.

Judge Preston. A good bloomer with flowers of a pretty bronze color. 75 cts. each, \$7.50 per doz.

Lawine. White, showing blush as the flower matures. 30 cts. each, \$3 per doz.

Pink Profusion. Shell-pink, deeper in tone at the tips of the petals. A mass of bloom from August until frost. 75 cts. each, \$7.50 per doz.



Cactus Dahlias

Standard Bearer. Rich fiery red. 30 cts. each, \$3 per doz.

The Vamp. Good dark maroon flowers of large size. \$1 each, \$10 per doz.

SHOW AND DECORATIVE DAHLIAS

These include the old-fashioned formal and rather stiff show or "ball" Dahlias, and the newer broad-petaled types of enormous size.

A. D. Livoni. (Show.) An old favorite for cutting. Soft pink. 25 cts. each, \$2.50 per doz.

Auguste Nonin. (Decorative.) A very large flower of fiery red. 30 cts. each, \$3 per doz.

Chesapeake. (Decorative.) Canary-yellow, striped and streaked with crimson. 75 cts. each, \$7.50 per doz.

Deadlock. (Decorative.) One of the best whites, often producing flowers 6 to 8 inches in diameter. \$1 each, \$10 per doz.

Delice. (Decorative.) A great favorite. Beautiful glowing rose-pink flowers on good, strong stems. 30 cts. each, \$3 per doz.

Hortulanus Witte. (Decorative.) A very large, long-stemmed, pure white Dahlia. 30 cts. each, \$3 per doz.

Jack's Discovery. (Decorative.) White, mottled with violet-rose. Unusual and attractive. 30 cts. each, \$3 per doz.

Lyndhurst. (Decorative.) Rich, vivid scarlet. 30 cts. each, \$3 per doz.

Mabel. (Decorative.) A most attractive shade of light mauve. Flowers of medium size on long stems. 50 cts. each, \$5 per doz.

Mina Burple. (Decorative.) Flowers of giant size, deep scarlet in color. A profuse bloomer and one of the most popular for every purpose. 25 cts. each, \$2.50 per doz.

Miss Minnie McCullough. (Decorative.) Soft yellow, overlaid with bronze. 25 cts. each, \$2.50 per doz.

Pride of California. (Decorative.) Large, deep red flowers held high on long, rigid stems. 75 cts. each, \$7.50 per doz.

Wm. F. Gude. (Decorative.) Pure white, long stems, good keeper, fine for cutting. 25 cts. each, \$2.50 per doz.



Decorative Dahlia



Gladiolus From August Until Frost Comes

You can do it with Gladioli if you make plantings about ten days apart from May to July. Here is a splendid collection of eight named varieties that you will surely want this year.

- | | |
|--|--|
| 1. MRS. FRANK PENDLETON. Salmon-pink and maroon. | 5. EVELYN KIRTLAND. Rosy pink. |
| 2. MRS. FRANCIS KING. Bright scarlet. | 6. SCHWABEN. Light yellow, carmine throat. |
| 3. ALICE TIPLADY. Orange-salmon, throat golden. | 7. BARON HULOT. Deep violet-blue. |
| 4. LA MARECHAL FOCH. Clear lavender-pink. | 8. HALLEY. Delicate salmon-pink. |

Three bulbs of each of above (24 bulbs) for \$2, postpaid \$2.10. Six bulbs of each of above (48 bulbs) for \$3.50, postpaid \$3.65

Mammoth Dahlia-Flowered Zinnias

*These blooms are about
two-fifths natural size*



This strain of ever-popular Zinnias was introduced in 1923. There is no comparison between the old varieties and these new, up-to-the-minute flowers. In size they are almost double the old sorts; in color they far surpass the very best of the old-timers. Best of all, the improvement in the strain has not weakened the plants nor reduced the flowering qualities.

The colors range from creamy white to deep yellow, from rose-pink to scarlet, crimson, and purple. You can expect great things from these new Zinnias and not be disappointed. For a mass of color in the annual garden few flowers will equal these Zinnias.

FINE MIXED COLORS.
Pkt. 10 cts., 1/2 oz. 75 cts.,
oz. \$1.25, postpaid.

5 ROSES FOR \$4.00

POSTPAID

WE offer a group of the most popular Hybrid Tea Roses in strong plants, good bloomers, lovely colors, similar to those which have given our friends so much satisfaction the past two seasons. These are field-grown bushes, two years old, and of first quality. Each plant is labeled, then all wrapped in one bundle and protected by damp moss for safe shipping.

With each collection we will send free a copy of "Garden Roses, How to Make Them Grow and Bloom." A carefully prepared booklet, by an experienced rose-grower, which will tell you how to succeed with Roses.

KAISERIN AUGUSTE VIKTORIA. Pure white, with a touch of lemon in the center. One of the most perfectly formed Roses in the world and a favorite for many years.

SUNBURST. Deep buff-yellow in the bud and freshly opened flower, becoming lighter as it opens and ages. Very beautifully shaped and when established, free-flowering and hardy.

JONKHEER J. L. MOCK. Superb in two strong tones of contrasting pink. Immense, handsome flowers of unusually heavy substance and great number of petals. A very imposing flower.

GRUSS AN TEPLITZ. Tall, bushy plants which bloom with the utmost freedom, producing medium-sized, velvety red flowers in clusters, and highly perfumed with the rich, old-fashioned rose scent.

LOS ANGELES. One of the most beautiful Roses in the world, gorgeously colored in flame, gold, and pink, and highly scented.

One each of the above Hybrid Tea Roses for \$4, postpaid

Kaiserin
Auguste
Viktoria

Sunburst

Jonkheer
J. L.
Mock

Gruss an Teplitz

Los Angeles





Roses, Shrubs, Vines, Flowering Plants

For Improving Home Grounds

THE success of this new department since its installation last year has fully justified the belief that our customers would appreciate and use the opportunity to obtain from a single source their entire agricultural and horticultural needs.

No argument is necessary to convince well-informed people that to create and to preserve attractive homes and home-grounds is most important. The benefits in beautiful surroundings and healthful living are incontestable, to say nothing of the genuine increase in real value to property.

It is almost miraculous what astounding improvement can be made in neglected or unattractive sites by giving a little thought and care to choosing and planting suitable trees, shrubs, and flowers. The principles of good taste apply in this outward decoration of the home as much as in all other things. That is, the planting must be simple and economical, and there must be no appearance of fussiness or overcrowding.

Two general rules must be kept in mind. Frame the grounds as a picture by defining its borders with permanent shrubs or trees, and connect the walls of the house with the green of the lawn by massing a few shrubs or bushes at the corners or along the foundations. Against these, as a background, flowers show to best advantage. The lawn should be kept open, clear, and smooth. In the real country, it is well to avoid the formality of clipped hedges; a natural hedge of barberry or a similar plant is better.

Ideas and information may be gleaned from many gardening and agricultural magazines or from the books which our Book Department (pages 207 and 208) offers for that purpose.

Shade Trees. In addition to the roses, shrubs, and vines which are described in this catalogue, we take orders for spring delivery of all kinds of ornamental and shade trees, in any amount from one up. These will not be carried in stock; they will only be ordered from the nursery as sold, so that you will receive freshly dug stocks. The earlier they are planted, the better growth they will make. Orders should be placed before March 15th. Ask for prices specifying variety and number wanted.

Potted and Bedding Plants. That our plant line may be complete, there will be found in our store, beginning in the spring, a very complete collection of Potted and Bedding Plants for room and garden decoration—palms, ferns, geraniums, and similar standard sorts. You will enjoy visiting the Plant Department. Come in.

Delivery of all plants is at the expense of the purchaser, and unless specific instructions are given at the time of purchase, we will ship them by the quickest, safest, and most reasonable method. If to be shipped by parcel post add to prices given 5 cts. for 1 plant, 25 cts. for 6 plants, 50 cts. for 12 plants.

ROSES

All the Roses listed in this catalogue are 2-year-old, No. 1, field-grown plants, and, with the exception of the climbers, they are budded stock. They are the best the nursery grows, they are stronger, will make a more thrifty growth, and give more blooms than the smaller No. 2 stock sold by department stores.



HYBRID TEA ROSES

Hybrid Tea Roses are extremely popular, perhaps the most popular Roses grown today. A cross between the Hybrid Perpetuals—which are not perpetual bloomers—and the Teas, which as a class are doubtfully hardy here in the North, they combine the hardiness of the former with the abundance of bloom of the latter—an ideal combination. The Hybrid Teas bloom abundantly for a month or more, beginning early in June; then as new growth is made they produce more blooms, particularly from September until hard frost. There is hardly a day, even in midsummer, when blooms may not be picked from a bed of Hybrid Tea Roses.

That the Hybrid Tea Roses may thrive, they need a rich, well-drained soil and sunny situation. Planting should be done in the early spring, just as soon as the ground can be worked. The best growth is made during the cool spring weather. For spring planting we suggest placing your order immediately so we can make an early delivery.

Insects and diseases are easily controlled. Frequent dusting with nicotine extract and sulphur will control black-spot, mildew, and the sucking insects; should chewing insects appear, arsenate of lead may be added to the dust at the rate of one part to nine parts of sulphur.

Set the plants 2 inches or more deeper than they were in the nursery, so as to get the bud below ground. Protect them over winter by mounding earth up about the stems.

Price, 75 cts. each, \$7.50 per doz., except where noted

Betty. A lovely and deliciously fragrant Rose; long buds, and coppery rose blooms, overspread with golden yellow. A continuous bloomer, and especially good in autumn.

Columbia. Large, fully double, bright lively pink blooms shading darker with age; borne abundantly till frost by almost thornless plants. Strong tea fragrance. Eighth on the twelve "Favored Roses of all America" referendum of the American Rose Society in 1923.

Duchess of Wellington. A dependable yellow Rose with spicy fragrance. Flowers large, of intense saffron-yellow, changing to deep coppery yellow as they develop; a lasting cut-flower. Ninth in the twelve "Favored Roses of all America" referendum of the American Rose Society in 1923.

General MacArthur. An unusually good American Rose that has found favor in England. Brilliant glowing scarlet buds that open to strongly fragrant, full blooms; free bloomer. One of the best all round Roses.

Constance. A very handsome bright yellow of distinctly beautiful form, with reddish streaks on the buds. Not as strong in growth as some but is worth having for its very distinct color and form.

Golden Emblem. A very dependable yellow Rose. Large, perfectly shaped blooms similar to Marechal Niel, borne in profusion. Price, \$1 each, \$10 per doz.

Gruss an Teplitz. One of the most useful and dependable Roses. Beautiful, clear crimson-scarlet, fragrant flowers, profusely borne till frost. Most desirable for bedding and a good hedge.

Hadley. Very fragrant, double, attractive blooms of velvety crimson borne on unusually long, strong stems.

Jonkheer J. L. Mock. Very large, full, and fragrant carmine blooms with deep shadings, silvery pink inside, borne on long, strong stems. It is an intensified La France. An abundant continuous bloomer; fine for beds. \$1 each, \$10 per doz.

Kaiserin Auguste Viktoria. A perfectly formed white Rose of unusual beauty. Popular for many years.

Lady Ashtown. An unusually hardy Hybrid Tea Rose. Large, full, high-centered blooms of light salmon-pink of fair lasting qualities; always recognized by its beautifully recurved petals.

Los Angeles. So fine a Rose in every way that no garden is complete without it. An attractive bud, opening to beautiful, silvery salmon-pink blooms. \$1 each, \$10 per doz.

Miss Lolita Armour. Very large, full, double, delightfully fragrant, deep coral-red blooms with a golden copper-red suffusion, borne on long stems. \$1 each, \$10 per doz.

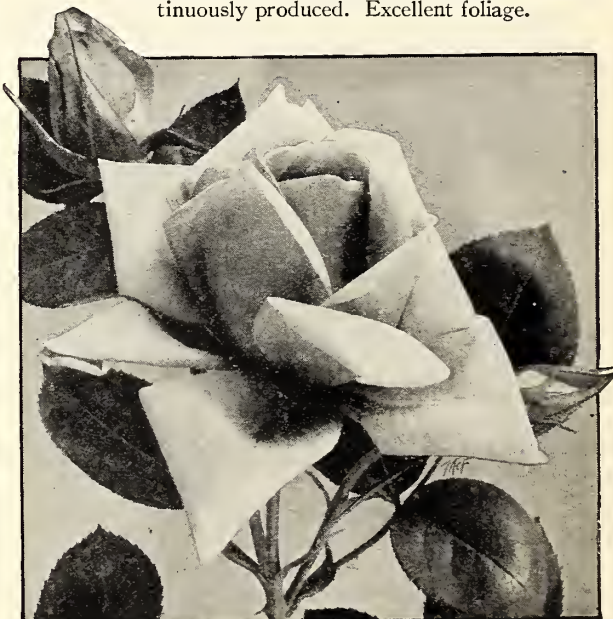
Mme. Butterfly. A wonderful Rose—an intensified Ophelia. Beautiful spiral bud opening to a large flower of exquisite beauty; soft flesh, shaded rose; fragrant; lasts well when cut.

Mme. Caroline Testout. Large, rounded, bright satiny rose blooms with dark center, the edges of the petals bordered soft carmine-pink. Borne continuously all summer.

Mme. Edouard Herriot. An indispensable Rose made famous by winning the *Daily Mail* (London) Gold Cup in 1912. Coral-red, shaded yellow and bright rosy scarlet.

Mrs. Calvin Coolidge. Pale creamy yellow, of the same general type as Ophelia. Especially attractive when cut and for buttonhole use.

Souvenir de Claudius Pernet. At present, the finest and most dependable yellow Rose. The color does not fade so badly as most yellows, and the flowers are freely and continuously produced. Excellent foliage.



Los Angeles Rose

HYBRID TEA ROSES, continued

Mrs. Aaron Ward. The most profuse blooming yellow Rose. Semi-double, cup-shaped, deep Indian yellow, fragrant flowers. Extremely hardy. Seventh in the twelve "Favored Roses of all America" referendum by the American Rose Society a few years ago.

Ophelia. One of the most beautiful Roses. Soft salmon-flesh blooms, the center shaded light yellow at the base of the petals. Unequaled in form, coloring, and fragrance. A good cut-flower. Has large, dark green, leathery, disease-resistant foliage. Third in the twelve "Favored Roses of all America" referendum held by the American Rose Society in 1923.

Radiance. Large, strongly fragrant, light silvery pink to salmon-pink flowers, borne profusely all summer on long, strong stems. First on the list of twelve "Favored Roses of all America" referendum held by the American Rose Society in 1923.

Red Radiance. A sport of Radiance and equally as good, differing only in the beautiful deep red color of the large globular flowers. Very hardy and of the greatest garden value.

Rose Marie. A superb American Rose. Large, fragrant, bright rose-pink blooms of pleasing shade and excellent form. Blooms abundantly; has glossy dark green foliage. One of the best bedding Roses of its color yet introduced.

Sunburst. Bright, glowing orange blooms, paling slightly at the edges of the petals; gives an excellent imitation of a real sunburst.

White Killarney. Large, long-pointed buds opening to large, loose, pure white, fragrant blooms, on long, strong stems by robust plants. \$1 each, \$10 per doz.

William F. Dreer. The large, double, fragrant golden yellow blooms, shaded peach and old rose, are borne continuously and abundantly by the disease-resistant plant until frost. A new American Rose of great merit.

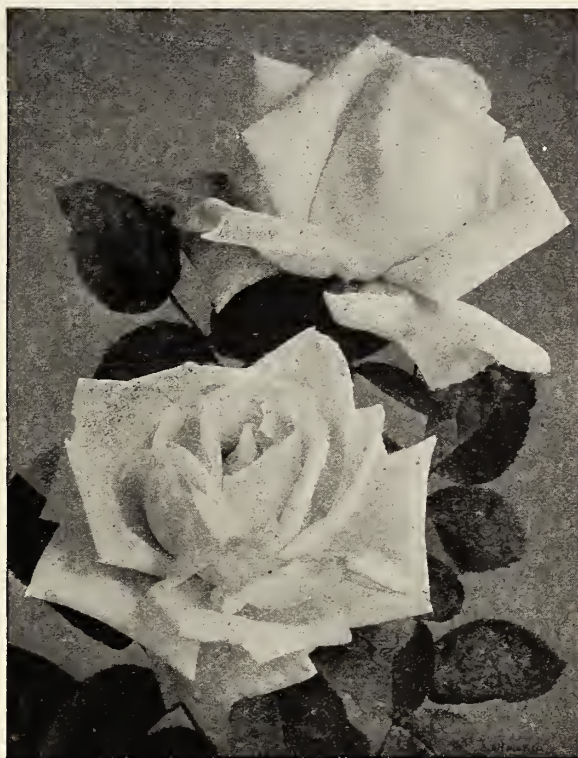
Willowmere. Long, pointed, coral-red buds opening to very large, open, double flowers of a rich shrimp-pink shaded yellow in the center.

HYBRID PERPETUAL ROSES

These, because of their wealth of bloom, named June as the month of Roses. They are much hardier, stronger growing plants than the Hybrid Teas and bear an immense crop of bloom in June. They may, if closely pruned after the first big crop, give a few scattering blooms in the late summer or early fall.



Bed of Hybrid Perpetual Roses



Frau Karl Druschki Roses

Set the plants $2\frac{1}{2}$ feet apart to insure plenty of room. Prune each spring before growth starts; the amount to cut back depends upon the habit of the plant. More vigorous plants should be less severely cut back than the weaker ones; the harder they are cut the more wood they make.

Price, 60 cts. each, \$6 per doz.

American Beauty. A dark pink, very full and fragrant variety which used to be very popular as a florists' cut-flower and has been reasonably good outdoors in certain localities.

Frau Karl Druschki. An immense, pure white, perfectly double Rose, sometimes nearly 6 inches in diameter, abundantly produced in June. If cut back after the first crop, it will bloom all summer, contrary to the general habit of this class. Second in the twelve "Favored Roses of all America" referendum of the American Rose Society in 1923.

General Jacqueminot. The long-time favorite "Jack" Rose. The fragrant, perfectly formed, brilliant scarlet-crimson blossoms come early, on long stems, and in great abundance.

George Arends. Sometimes called "Pink Druschki." Large full, very fragrant, soft light pink blooms; better as a fall bloomer than most Hybrid Perpetuals.

Mrs. John Laing. Immense, full, delightfully fragrant, very beautiful soft pink flowers, borne profusely by a low, sturdy plant.

Paul Neyron. Probably the biggest Rose in commerce, the clear pink, fragrant blooms often measuring 6 inches in diameter. Plant is tall and can be grown as a pillar Rose. It is one of the most satisfactory of the Hybrid Perpetual Roses.

Persian Yellow. Small but very full, deep yellow flowers on short stems. The dense, thorny plants, $2\frac{1}{2}$ feet high, make an excellent hedge. Resents pruning.

Soleil d'Or. Beautiful, long-pointed yellow buds, opening to very large, full, orange-yellow flowers that vary to ruddy gold. Prune lightly.

Plants by Parcel Post.

If plants are to be shipped by parcel post, add to the prices given, 5 cts. for 1 plant, 25 cts. for 6 plants, 50 cts. for 12 plants.

CLIMBING ROSES

Present-day Climbing Roses are destined to make Rose-growing universal. Everyone here listed is a strong grower, will endure neglect, bloom profusely, and after the June bloom-burst the foliage is attractive all summer. They may be used to cover porches, pillars, trellises and fences, unsightly objects, such as banks along farm-lanes, stone-piles, and ledges. Many other situations will suggest themselves to you as you study your own places. Can you picture anything more beautiful than the fence along the road festooned in June with beautiful Roses?

These hardy climbers need but little attention except pruning once a year, which is immediately after the flowering period is over. At such time very old or undesirable wood is removed. New wood will replace it and these new growths can be stopped anywhere by pinching out the tips.

By the judicious planting of Climbing Roses you can at a small expense, increase the beauty of the home-grounds.

Price, 60 cts. each, \$6 per doz., \$50 per 100, except where noted

American Pillar. A glorious Rose. Large clusters of bright crimson flowers with clear white eyes, that are intensified by bunches of golden yellow stamens. Each cluster is borne on a long, strong stem. A very vigorous climber, making plenty of strong canes, with large, leathery foliage. Stands second in the 1923 "Favorite Dozen Climbing Roses" referendum of the American Rose Society.

Climbing American Beauty. Moderately fragrant, rich, rosy carmine, 3 to 4-inch blooms on long stems, profusely borne by a very vigorous, hardy plant. It will succeed in almost any situation once it has become established. Is sixth in the 1923 "Favorite Dozen Climbing Roses" referendum of the American Rose Society.

Crimson Rambler. A Japanese importation that immediately became popular. Great masses of crimson, semi-double flowers are borne by vigorous plants. Desirable as a pillar or porch plant but is particularly adapted to dry situations where others would winter-kill. Eleventh in the 1923 "Favorite Dozen Climbing Rose" referendum of the American Rose Society.

Dorothy Perkins. Clear cherry-pink, slightly fragrant flowers, borne in great profusion and lasting for a long time; they are double and the petals crinkled, which gives them a delightfully fluffy appearance. The bright glossy green foliage persists until frost. Fifth in the 1923 "Favorite Dozen Climbing Roses" referendum of the American Rose Society.



Dorothy Perkins Climbing Rose



American Pillar Rose

Dr. W. Van Fleet. The most popular climbing Rose, according to the American Rose Society's "Favorite Dozen Climbing Roses" referendum. Perfectly formed, long-pointed, deep pink buds on long stems, with several in a cluster, each expanding to about 4 inches. A vigorous grower with abundant, dark green, glossy, disease-resistant foliage that delights the eye all summer. Grows 20 feet or more high; bears hundreds of delicately perfumed blooms that make good cut-flowers.

Excelsa. Intense scarlet-crimson, small, double flowers produced in immense clusters by a very vigorous plant furnished with glossy, disease-resistant foliage. Eighth in the 1923 "Favorite Dozen Climbing Roses" referendum.

Paul's Scarlet Climber. The purest red of all the pillar Roses. Clusters of semi-double, vivid scarlet flowers shaded crimson, that retain their color till they fall, never turning blue. The color is intensified by the numerous yellow stamens. Fourth in the 1923 "Favorite Dozen Climbing Roses" referendum of the American Rose Society. Not a very tall climber but hardy and floriferous.

Seven Sisters (Greville). An old-fashioned climber which is a form of the Roxburgh Rose, and is still sought after by people who want old things. It was very popular at one time. The flowers are produced in large clusters once each season. They are double, usually purplish-pink, but vary from bud to open flower through many shades of white, pink, and red. Growth is very coarse and tall, reaching 18 feet or more.

Silver Moon. A wonderful Rose. Immense, semi-double, pure white blooms 4 inches across, intensified by golden yellow stamens, are borne on long, stiff stems. Very strong-growing plants covered with rich, dark green foliage and a profusion of bloom. Third in the 1923 "Favorite Dozen Climbing Roses" referendum of the American Rose Society. Without doubt the most unusual and best white climbing Rose.

Tausendschon. A most distinctive and valuable Rose. The cherry-pink buds open to very double flowers of softer shades that eventually fade to white, and all shades are found in a single cluster. The glossy, light green, disease-resistant foliage and almost thornless stems make a desirable wall-covering. Seventh in the 1923 "Favorite Dozen Climbing Roses" referendum of the American Rose Society.

Yellow Rambler. Beautiful, small, golden yellow buds, developing to full, double, primrose blooms with a golden center and a delightful fragrance. The vigorous plants bloom profusely.

FLOWERING SHRUBS

There is not a farm nor suburban home but what can be greatly improved by the use of a few good flowering shrubs. There are no hard and fast rules to follow when beautifying the home-grounds, other than that vistas or views should be retained or made—not spoiled or shut out by a misplaced tree or shrub. Irregular groups or masses of shrubs should surround the buildings and follow the fences or outline the yard with an open space for lawn.

Flowering shrubs thrive on any land that will grow corn or potatoes. No diseases nor insects of any great importance infest them, so they seldom need spraying. Fertilizing once a year with some commercial fertilizer, or well-decayed stable manure, and pruning are all they require. Pruning, however, is an important piece of work, for the year's crop of flowers can be quickly lost by pruning at the wrong time. All of the shrubs offered in this list, with the exception of the althæa, Hydrangea Peegee, and Spiræa, Anthony Waterer, are pruned in the summer immediately after flowering.

ALTHÆA. Rose of Sharon. A very useful shrub with large, single or double flowers that appear in great profusion in late summer, a time when flowering shrubs are scarce.

Pink, Purple, Red, or White varieties. 2 to 3 ft. 50 cts. each, \$5 per doz.

CORNUS alba sibirica. Siberian Dogwood. An upright shrub having bright coral-red branches with dark green leaves, pale beneath, and creamy white flowers in numerous flat-topped clusters, followed by bluish fruits. 2 to 3 ft. 50 cts. each, \$5 per doz.

CYDONIA japonica. Japan Quince. Scarlet and vivid pink flowers. Very early. 2 to 3 ft. 75 cts. each, \$7.50 per doz.

DEUTZIA gracilis. Slender Deutzia. A small shrub with slender, often arching branches covered with pure white flowers in graceful nodding racemes. Good for edging borders. 2 ft. 60 cts. each, \$6 per doz.

Pride of Rochester. A very popular blush-white form, growing taller and bushier than the former. 2 ft. 60 cts. each, \$6 per doz.

FORSYTHIA. Golden Bell. One of the very earliest shrubs to bloom and unsurpassed in splendor and brilliancy by other spring flowering varieties. The tall, arching branches are covered with golden yellow blooms in April. Good as single specimens or as a hedge. 2 to 3 ft. 60 cts. each, \$9 per doz.

HYDRANGEA Peegee. Big, conical trusses of white flowers that soon assume rose and bronze tones, are borne in late summer and last till frost. Severe pruning in early spring brings big trusses of bloom. 2 to 3 ft. 85 cts. each, \$9 per doz.

LONICERA tatarica. Red Tartarian Honeysuckle. A bushy shrub, reaching 10 feet, with crimson flowers in June, followed by red fruits. 2 to 3 ft. 60 cts. each, \$6 per doz.

tatarica alba. A white-flowered form of the above. 2 to 3 ft. 60 cts. each, \$6 per doz.

PHILADELPHUS coronarius. Mock Orange. An upright shrub, 8 feet high, with arching branches that bear, in June, a wealth of pure white, very fragrant flowers in clusters. Each flower is about an inch across and its purity is intensified by the cluster of golden yellow stamens. 2 to 3 ft. 50 cts. each, \$5 per doz.

Philadelphus coronarius aureus. An attractive golden-leaved form of the preceding. 2 to 3 ft. 75 cts. each, \$7.50 per doz.

SPIRÆA, Anthony Waterer. Bright rosy crimson flowers in dense corymbs produced abundantly from July till frost. Fine for facing plantings of larger shrubs or edging walks. 1 to 1½ ft. 50 cts. each, \$5 per doz.

Frœbeli. Large, flattish heads of bright crimson flowers. 1½ to 2 ft. 50 cts. each, \$5 per doz.

Van Houttei. One of the most beautiful spring-blooming shrubs. The arching branches bend to the ground under the immense number of corymbs of small white flowers. 2 to 3 ft. 50 cts. each, \$5 per doz.

SYMPHORICARPOS racemosus. Snowberry. Pinkish flowers and large clusters of pearly white fruit which endures into the winter. 2 to 3 ft. 60 cts. each, \$6 per doz.

orbiculatus. Indian Currant. Tall, slender shrub, with coral-red fruits. 2 to 3 ft. 50 cts. each, \$5 per doz.

SYRINGA vulgaris. Lilac. A great favorite of old gardens; many a Lilac bush cherished by some hardy pioneer woman is all that remains to mark an old homestead. Late in May the bush is crowned with many purple or white spikes of fragrant flowers.

Purple Lilac. 2 to 3 ft. 60 cts. each, \$6 per doz.

White Lilac. 2 to 3 ft. 60 cts. each, \$6 per doz.

VIBURNUM opulus sterile. Snowball. A large shrub with white ball-like clusters of flowers in May and June. 2 to 3 ft. \$1 each.

WEIGELA, Eva Rathke. An upright shrub 5 to 6 feet high, with arching branches covered in late May with an abundance of slightly fragrant, rich reddish purple, trumpet-shaped flowers 1½ inches long and 1 inch in diameter. 1½ to 2 ft. 85 cts. each, \$9 per doz.

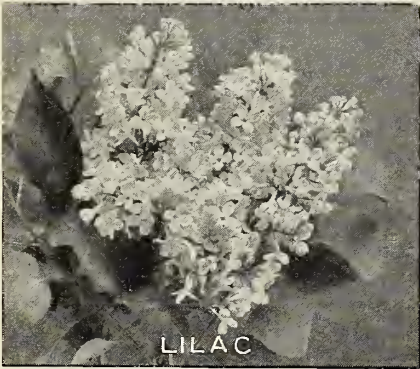
rosea. The Weigela of our grandmothers. An attractive shrub with spreading branches covered with beautiful dark green foliage and a wealth of trumpet-shaped, slightly fragrant, rose-colored flowers. 2 to 3 ft. 60 cts. each, \$6 per doz.



ALTHÆA



HYDRANGEA PANICULATA



LILAC



SPIRÆA VAN-HOUTTEI

PEONIES

Peonies are among the most gorgeous plants that can be grown in a garden. Given a deep, rich soil and a sunny situation they will thrive anywhere. A mulch of manure each fall will help to maintain them. Plant the roots 2 to 3 inches below the surface of the ground. The following are very desirable varieties. They are strong divisions with 3 to 5 eyes, and plenty of roots, and are of more generous size than usually secured from the growers.

Price, 60 cts. each, \$6 per doz.

Charlemagne. Large, globular, rose to lilac-white blooms, with slight blush center; fragrant. Late.

Comte de Diesbach. Medium-sized, compact bomb-shaped, fragrant, magenta blooms. Midseason.

Delache. One of the best of its type. Large, rosy magenta, rose type blooms. Midseason to late.

Edulis Superba. Large, loose, dark pink, crown type blooms. An extra-good variety for marketing. Early.

Festiva Maxima. Very large, pure white, globular type flowers; center petals sometimes flecked crimson. A vigorous grower and abundant bloomer. The most popular white for cut-flowers.

Fragrans. Medium-sized, dark pink, bomb-type blooms, with silvery reflex; fragrant. Late.

Francois Ortegat. Very striking, semi-double, purplish crimson blooms with brilliant golden anthers.

Grandiflora Rosea. Light rose; outer petals very large, inner smaller and bunched. A vigorous grower.

Louis Van Houtte. Very brilliant, deep carmine-rose blooms, tipped with silver and a fiery reflex; medium size; fragrant. Late.

Nigricans. Semi-rose, globular blooms of very deep rich, dark crimson. Particularly good for landscaping, also for cutting. Midseason to late.

Officinalis Mutabilis Alba. Strong-growing plant bearing a profusion of light pink blooms that shade to white.

Officinalis Roseo-plena. Soft, bright rose blooms, borne abundantly on strong plants.

Officinalis Rubro-plena. A popular and very early double crimson variety because of its color and abundance of bloom.

Queen Victoria. Medium-sized, globular crown type bloom of white petals slightly flecked and splashed with crimson; fragrant. Midseason.

Rosea Superba. Medium to large, pale lilac-rose blooms, center tipped cream-white. Good market bloom. Early to midseason.



PHLOX

The Perennial Phlox is a universal favorite and one of the most showy of the garden plants. Each stem grows 2 to 3 feet high, according to variety, and is crowned with large trusses of blooms of varied colors—red, purple, white, salmon, and parti-colored.

The Phlox thrives in a cool, moist, but well-drained fertile loam. It blooms in early summer, but can be delayed until late summer or fall when flowers are most needed in the garden, by pinching out the tops of the growing shoots. These are strong, 2-year-old plants that will give satisfactory growth and bloom the same year they are planted; they should not be compared with the small 2-inch pot plants which do not give an abundance of bloom the first year. The following varieties are highly recommended.

Price, 25 cts. each, 4 for 85 cts., \$2.25 per doz., except where noted



Bridesmaid. Tall, white flowers with rosy crimson eye.

Champs-Elysees. Bright rosy magenta blooms in large trusses.

Elizabeth Campbell. Very large trusses of a distinct light salmon, shading pink on the centers of the blooms. 50 cts. each, \$5 per doz.

Fernand Cortez. Deep crimson.

Lassburg. Immense pure white panicles.

Miss Lingard. Pure white flowers with pale pink centers in very large, long trusses, sometimes 1½ feet long. The earliest white; fine for massing for landscape effects.

Mrs. Charles Dorr. A beautiful shade of lavender.

Richard Wallace. White with large carmine eye.

R. P. Struthers. Cherry-red, suffused salmon.

Sunset. Dark rosy pink.

Plants by Parcel Post.

If plants are to be shipped by parcel post, add to the prices given, 5 cts. for 1 plant, 25 cts. for 6 plants, 50 cts. for 12 plants.

VINES

Well-placed vines make a wonderful addition to the looks of the home or garden. By softening the sharp corners of the buildings and porches, they add a charm not otherwise obtainable. Vine-draped trees and pergolas have a peculiarly appealing grace not easily described, and some of the vines are particularly valuable in covering banks. The following are highly desirable vines. They are all strong, 2-year-old No. 1, field-grown plants, with good root systems.

AMPELOPSIS *tricuspidata*.

Boston Ivy. High climbing, clinging deciduous vine with lustrous, three-pointed leaves 2 to 4 inches across. Autumnal coloring crimson scarlet. The best climbing vine for covering houses, walls etc., in this vicinity. 75 cts. each, \$7.50 per doz.

ARISTOLOCHIA Siphio. Dutchman's Pipe. A fast-growing vine for covering porches, pergolas, etc. The 6 to 15-inch broadly reniform leaves cast a dense shade. Peculiar pipe-like flowers. 1½ to 2-ft. plants, \$1.25 each, \$12.50 per doz.

CLEMATIS Jackmani. Large, flat, 5 to 6-inch, velvety purple flowers, usually in threes, freely produced and are highly prized because of their beauty and splendor. Train them over porches or on fences. \$1 each, \$10 per doz.

paniculata. Sweet Autumn Clematis. In August or September the plants are densely covered with fragrant white flowers, followed by seeds, each of which has a grayish, fuzzy plume which gives the plant the appearance of being in bloom until winter comes. Produces dense shade all summer; train them over porches or summer-houses. 50 cts. each, \$5 per doz.



Clematis paniculata

Clematis, Mme. Edouard Andre. Large flowers of bright carmine-violet. Unusual and distinct. \$1 each, \$10 per doz.

LONICERA Halliana. Hall's Honeysuckle. Dark green foliage, with attractive, sweetly scented flowers, produced from July to frost. Desirable for trailing over fences, arbors, and as a ground-cover for banks; weeds will not grow through it. 35 cts. each, \$3.50 per doz.

WISTERIA sinensis. Handsome, showy, pea-like flowers in large grape-like clusters. Well adapted for training on porches, arbors, trellises, or trees. They require a deep rich soil but the great profusion of bloom well repays one for the trouble of supplying it. Strong, 2-year plants supplied.

Purple. Long, pendulous clusters of pale blue flowers. 75 cts. each, \$7.50 per doz.

White. Like the above, except pure white flowers. 75 cts. each, \$7.50 per doz.

HEDGE PLANTS

Hedges or living fences make the most artistic boundaries for the farm, to mark the line between highway and farm, to define the driveways or enclose the home-grounds. They add much to the value of the place. Once planted they require little attention. These are strong, thrifty, attractively shaped plants that will make desirable specimens on your lawn.

BERBERIS Thunbergi. Japanese Barberry. Compact-growing, much-branched low shrub whose many spines deter animals from breaking through. Its red berries persist until spring. 4 ft. 1 to 1½-ft. plants, \$2 for 10, \$15 per 100.



Hedge of Red-Leaved Barberry

BERBERIS Thunbergi. Red-leaved Barberry. Exactly like the well-known Japanese Barberry, except that the foliage is rich crimson, becoming brilliant scarlet when the sun falls on it. A wholly new and most spectacular plant which is creating a tremendous furore. New this year and will undoubtedly be one of the most popular plants for lawn and garden hedge work. 12 to 15-in. plants, 75 cts. each, \$7.50 per doz.

BUXUS arborescens. Boxwood. Excellent for specimen shrubs or dignified hedging. Evergreen and hardy. 12 to 15-in. plants, \$2.50 each.

LIGUSTRUM ovalifolium. California Privet. The most popular hedge plant. A rapid grower with dark green foliage that persists until early winter. May be pruned to any shape. Unpruned, it assumes an upright, spreading habit, about 10 feet tall. 1 to 1½-ft. plants, \$1 for 25, \$3.50 per 100. 2 to 3-ft. plants, \$2 for 25, \$7.50 per 100.

Lodense Privet. The new dwarf Privet introduced only last fall, but we have been watching it in a northern nursery for several years. A distinct, extremely compact, low-growing plant that is hardy throughout most of the United States and much of Canada and can be sheared to any form. Most desirable for low hedges, to mark out garden lines, and define driveways instead of boxwood, which is not reliably hardy, or it can be grown in pots and tubs for porch decorations. As an easily grown, moderate-priced, low hedge or border plant Lodense has no equal; it's just what you have been looking for. 2-yr. plants, \$2 for 10, \$15 per 100.

Hardy Flowering Perennials

No yard or garden is complete without a bed or border of hardy perennials. They are the most satisfactory of garden plants. If set in good garden loam they require only a little attention, for which the grower is repaid with an abundance of attractive flowers each year. Their variety is so great that by making a selection these will bloom from spring to cold weather.

Price, 30 cts. each, \$3 per doz., except as noted. (See page 54 for parcel post deliveries)

ANEMONE japonica. Japanese Anemone. Tall, stately plants, blooming from early fall to frost.

Queen Charlotte. Semi-double; pink.

Whirlwind. White; semi-double.

AQUILEGIA, Long-spurred Hybrids. Charming color tones. Hardly any two alike.

BUDDLEIA magnifica. Butterfly Bush. Large, deep rose-purple flowers in dense spikes. Mid-August on.

CAMPANULA medium. Canterbury Bells. Very beautiful bell-like flowers in blue, pink, and white, profusely borne.

CHRYSANTHEMUMS, Hardy. Bloom after other flowers are gone.

Alice Howell. Orange-yellow.

Autumn Glow. Rosy crimson.

Donald. Light pink.

Fireball. Yellow, tipped crimson.

Glory of Seven Oaks. Yellow.

Julia. Orange-scarlet.

L'Argenteuilais. Chestnut.

Oconto. White.

Old Homestead. Soft pink.

Triomphe d'Or. Golden yellow.

DELPHINIUM. Larkspur.

Belladonna. Clear turquoise-blue flowers from June to frost.

Bellamosa. A dark blue of above.

Gold Medal Hybrids. Very long spikes of the very finest colors.

DIANTHUS barbatus. Sweet William. Rich vari-colored flowers in large heads in early summer.

DICENTRA spectabilis. Bleeding Heart. Long racemes of quaintly shaped pink flowers. 75 cts. each, \$7.50 per doz.

DIGITALIS. Foxglove. Dignified spires with long purple blooms.

HIBISCUS. Marsh Mallows. Strong, almost shrubby plants with gigantic flowers of red, white, and pink.

HOLLYHOCKS, Assorted colors. Bold, spire-like stalks of bloom.

IRIS, German. Superb varieties of this popular garden plant. One of the easiest spring flowers grown.

Japanese. Most attractive white, gold, or blue flowers.

SHASTA DAISY. Blooms 4 to 5 inches across; pure white with yellow center.

TRITOMA Pfitzeri. Red-Hot Poker. Spikes of orange-scarlet flowers.

YUCCA filamentosa. 5-foot flower-stalk crowded with large, creamy blooms.



Gold Medal Hybrid Delphiniums

Fruit Department

Why not use fruit trees instead of shade trees for the front lawn? They cast a good shade, especially the apple tree, and in the spring they are covered with a wealth of bloom that no shade tree can equal. In addition, they produce fruit of which but few persons have enough. In making the selection of fruits to offer our customers, we believe the following will give the best results in the districts where they live. All fruit trees offered are No. 1 grade and are F.O.B. cars, Pittsburgh, Pa. Orders for Fruit Trees should be placed before March 15.

Apples

Two-year-old budded trees, 75 cts. each, \$6.50 for 10 Baldwin. Best all-round winter Apple in northern counties.

Delicious. The finest dessert Apple imaginable; midwinter.

Duchess of Oldenburg. Tart, midsummer.

Grimes Golden. Delicious flavor all its own; early winter.

Jonathan. Beautiful red spicy-flavored fruits; early winter.

McIntosh. Spicy; bright red; late fall sort.

Northern Spy. Desirable winter sort for northern counties.

Rambo. Well-flavored, juicy fruits; fall.

Red Astrachan. Best summer dessert and cooking Apple.

Rome Beauty. Handsome fruits of good quality; midwinter.

Stark. Attractive; red-cheeked; mildly acid; late.

Stayman. Juicy, melting flesh; midwinter.

Wealthy. High quality, early fall sort.

Winter Banana. Lemon-yellow fruit with bright red cheek.

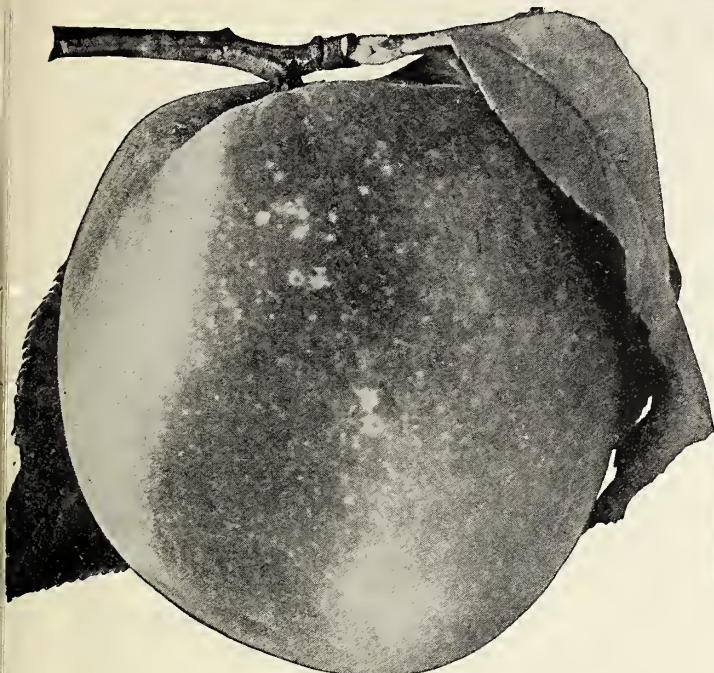
Winesap. Dark red, juicy, high quality winter Apple.

Yellow Transparent. Earliest ripening Apple; good cooker.

York Imperial. A wonderful keeping, fair-flavored variety.



Winesap Apples



Elberta Peach

Pears

Two-year-old budded trees, 90 cts. each, \$8 for 10

Bartlett. Without doubt the best dessert and canning Pear.
Beurre d'Anjou. Popular, high-quality late Pear.
Clapp's Favorite. Superb large yellow fruits; early.
Duchesse d'Angouleme. Big, rich-flavored fruits; late.
Kieffer. A fine culinary Pear; keeps well in storage.
Seckel. Small, delicious fruits; extremely popular.
Sheldon. Melting flesh of high quality; late.

Peaches

Two-year-old budded trees, 50 cts. each, \$4 for 10

Belle. White; large; sweet; of high quality; late August.
Captain Ede. Yellow; handsome; high quality; follows Elberta.
Carman. White, highly flavored early fruits.
Champion. Deliciously flavored white Peach following Carman.
Crawford Early. Yellow and of unexcelled quality.
Crawford Late. A fine yellow peach of finest flavor.
Crosby. Very high quality white fruit; late August.
Elberta. The standard yellow; large, highly flavored, juicy fruits in early September.
Greensboro. Early white cling, of high quality; mid-July.
Iron Mountain. White; very hardy; of excellent quality; late.
J. H. Hale. Big yellow fruits of high quality; late August.
Lemon Free. The hardiest Peach; will stand more frost than others; high quality; fine for canning.
Mayflower. The first to ripen. White; cling; good quality.
Rochester. A very hardy; early yellow; of high quality.

Plums

Two-year-old budded trees, 75 cts. each, \$6.50 for 10

Bradshaw. Fine, large, early, juicy Plum; early August.
Fellenberg. Delicious, juicy flesh; fine for drying.
German Prune. High-quality fruits; stands more frost than others; late August.
Grand Duke. Very large, late, finely flavored blue fruits.
Imperial Gage. Large, greenish fruits, fine for canning.
Lombard. Handsome reddish fruits with pleasant, juicy flesh.
Reine Claude. A great favorite. Fine-flavored greenish fruits; September.
Shropshire Damson. Like Damson but larger, fine for butter.
York State Prune. One of the largest and best quality Plums.

Quinces

Two-year-old budded trees, \$1.50 each, \$12.50 for 10

Champion. Large, late-ripening sort of high quality.
Orange. A mighty fine-quality variety and extremely popular.

Sweet Cherries

Two-year-old budded trees, \$1 each, \$9 for 10

Black Tartarian. Fine old fruitful sort; black fruits; late.
Governor Wood. A fine home sort; russet yellow.
Napoleon. Prolific; yellow with red cheeks; midseason.
Windsor. Large, liver-colored; hangs long time; very late.

Sour Cherries

Two-year-old budded trees, 75 cts. each, \$6.50 for 10

Early Richmond. Popular early fruit; good cooker.
Montmorency. The best sour Cherry; heavy crops; midseason.
English Morello. Dark red; rich fruits; very late.

Currants

Two-year-old plants, 30 cts. each, \$2.50 for 10

Fay. Medium to long clusters of dark red, juicy fruits.
Perfection. Large, bright red fruits; big clusters.
Wilder. Medium-sized, mildly acid berries in large clusters.
White Grape. Large white berries in long clusters.

Gooseberries

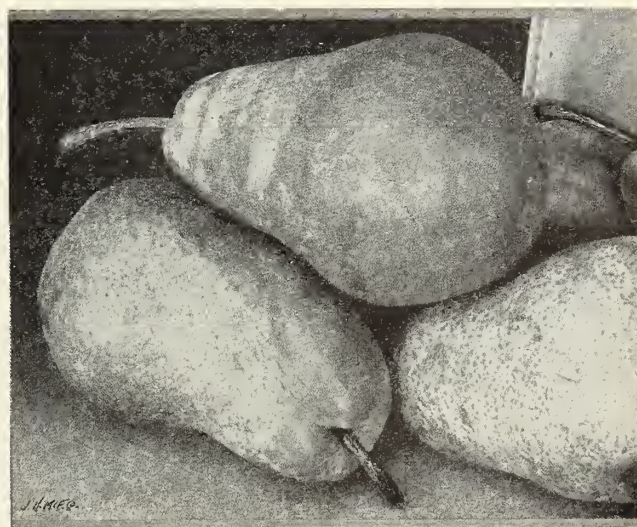
Two-year-old plants, 35 cts. each, \$3 for 10

Chautauqua. Pale green, highly flavored, sweet fruits.
Downing. The most widely planted and highly-prized sort.
Red Jacket. Reddish green; juicy, highly palatable flesh.

Grapes

Two-year-old plants, 35 cts. each, \$3 for 10, except as noted

Brighton. Large bunches; big red berries of excellent flavor; productive and vigorous.
Catawba. Luscious dark red berries; best table quality; late ripening and keeps well.
Concord. The standard Grape. Rich, sweet, juicy fruits; most reliable. 25 cts. each, \$2 for 10.
Delaware. Small, sweet, spicy, delicious berries; compact growth, taking up very little room.
Moore's Early. Like Concord, but two weeks earlier.
Niagara. An extremely fine, sweet, white Grape.
Worden. Large bunches of big, black berries of high quality. Earlier than Concord.



Bartlett Pears

STRAWBERRY PLANTS

Strawberries in the Garden. No home garden is complete without a bed or a few rows of Strawberries. This earliest and most delicious fruit, coming at a time when no other fresh fruit can be had, is liked by everybody. By planting some everbearers in addition to the early varieties, you can have fresh berries for the table from June to November, or until freezing weather sets in. What greater pleasure than picking your daily supply of fresh ripe berries "right off your own vines"?

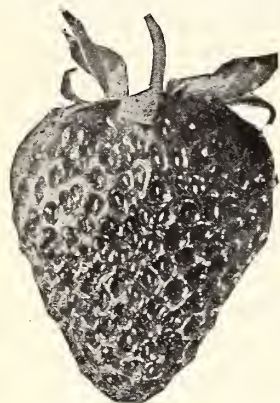
Strawberries for Profit. We know of no other crop that produces equal returns for the acreage planted or the time and labor expended. Market-gardeners and farmers are beginning to appreciate the enormous and ever-increasing demand for fancy home-grown berries and are limiting their acreage only to the amount they are able to take care of at picking-time.

Our Plants. The plants we offer are "new-ground plants" grown in virgin soil in one of the best plant-growing districts of the Northwest. They are large, strong, fully developed plants, ready to make a quick, steady growth the first year.

Order Early. The earlier you order the surer you are to get the varieties you want. Strawberry plants should be set out as early in spring as the ground can be prepared, the earlier the better. The plants will be sent as soon as they can be dug in the spring and if your ground is not ready heel them in and cover with straw until you plant them.

Distance for Planting and Plants Required per Acre

Commercial use. $3\frac{3}{4}$ ft. x $1\frac{1}{2}$ ft.	7,920 plants
Garden use. $2\frac{1}{2}$ ft. x $1\frac{1}{2}$ ft.	11,600 plants
Everbearing Strawberries. $2\frac{1}{2}$ ft. x $1\frac{1}{2}$ ft.	11,600 plants



Aroma Strawberry

Extra-Early

Charles I. The earliest Strawberry that ripens in the spring. Produces a big crop of large, evenly shaped, well-colored berries, particularly adapted for nearby markets. Very productive.

Premier. The best early Strawberry without a fault. Excellent in quality, color and flavor. Its unusual firmness makes it an ideal shipper. The best early commercial berry today.

Second-Early

Cooper. The largest Strawberry ever produced. Ripens with second earlies. Plants large and vigorous. Berry has a sweet, delicious flavor. A new variety that built its reputation in one year.

Senator Dunlap. For many years has been grown as the main-crop berry throughout the country. Will produce a full crop in a wider range of soil and climate than any other variety. A very heavy bearer of good-sized, uniformly shaped berries of beautiful dark red color.

Dr. Burrill. This is truly a most remarkable Strawberry—one of the best all-round varieties ever produced. It is really in a class by itself, for in size, flavor, and color, combined with its sturdy root system and heavy crown, it has few equals and no superiors. The Dr. Burrill fruits from mid-season until late and is a ready seller on the market. As a dry-weather producer it can not be beat, the long roots taking moisture from a greater soil-depth and producing heavier foliage and crops than most varieties under similar dry-season conditions.

Medium-Late

Eaton. Best all-round Strawberry on the market today. Unusually prolific; fruit large in size. The best in quality and flavor and of unusual firmness, allowing the berry to be safely shipped a distance of 200 miles. Unexcelled for either home gardens or commercial plantings.

Gibson. Produces two to four fruit-stems on each plant, making it one of the heaviest bearing Strawberries. Fruit of fine quality, texture, and flavor. Excellent for table use, canning, or market. We recommend this highly.

Brandywine. The Brandywine is a valuable late Strawberry especially adapted to home use and canning, owing to its very dark red color and fine flavor. Brandywine is late, of good shape, quality and size, firm, productive. It is strongly staminate, making an excellent mating variety.

Very Late Strawberries

Aroma. Widely grown throughout the country as the standard late variety. A sure cropper. Produces quantities of large berries, uniformly round in shape, and deep glossy red in color, having a tough skin and firm flesh, making it an ideal shipper.

Pearl. A new Strawberry, and latest known. A first-quality berry in point of flavor, size, and color of fruit, vigor and hardness of plant.

Everbearing Strawberries

Champion. The most popular everbearing Strawberry known today, even outclassing Progressive, the former standard of excellence. Holds world's record for largest production. Berries large in size, beautiful in color and appearance, of unusually fine flavor. Produces fruit constantly from midsummer until killing frosts in late autumn.

Progressive. An old favorite of the everbearing kinds. Very similar in appearance and quality to Champion, but not so prolific.

PRICES

	Per 25	Per 50	Per 100	Per 1,000
Charles I. Extra early	\$0 40	\$0 70	\$1 20	\$7 00
Premier. Extra early	40	70	1 20	7 00
Cooper. Second early	60	1 00	1 75	12 00
Senator Dunlap. Second early	45	80	1 40	7 00
Dr. Burrill. Second early	45	80	1 45	7 00
Eaton. Medium late	40	70	1 20	7 00
Gibson. Medium late	45	80	1 40	7 00
Brandywine. Medium late	45	80	1 45	7 00
Aroma. Very late	60	1 00	1 75	10 00
Pearl. Very late	60	1 00	1 75	12 00
Champion. Everbearing	75	1 40	2 60	15 00
Progressive. Everbearing	75	1 40	2 60	15 00

Orders for 500 or more of one variety will be furnished at the 1,000 rate.

PLANTS BY PARCEL POST

Add to the above prices for postage as follows: 25 plants 10 cts.; 50 plants 15 cts.; 100 plants 25 cts.; over 100 plants, 25 cts. for each 100.

Unless postage is included in remittance, plants will be sent by express, charges collect. On orders for 500 plants and upward we recommend express shipment.



Cooper Strawberry

FIELD SEEDS

The Grains and Grass Seeds we offer are selected with special reference to their purity and germination, and great care is used to have them free from noxious foreign seeds. We handle the very best seeds the market affords, regardless of price.

The Pennsylvania Seed Law requires that every package of field seeds offered for sale, weighing ten pounds or more, shall bear a label or tag giving the percentage of purity, the percentage of weed seeds, the names and number of noxious weed seeds per ounce, and the percentage of germination with the date of test.

Every farmer should write the Pennsylvania Department of Agriculture, Harrisburg, Pa., for a copy of this law, and insist on this information when purchasing seeds.

Prices

Owing to the frequent changes in the prices of Field Seeds and Grains, we cannot, in fairness to our customers or ourselves, name prices in our catalogue. Catalogue prices are largely guess-work, and we prefer to have our customers ask us for prices when they are ready to buy, specifying the quantities of the different seeds wanted.

With the prices we will send samples, with purity and germination tests.



Sweet Clover

CLOVERS

MEDIUM RED. More widely known than any other variety of Clover. Makes a standard Clover for hay purposes, as it can be cut at least twice in the season. Plants grow about 2 feet in height. Sow the seed in the early spring or late summer at the rate of fifteen to twenty pounds to an acre. If used with other seeds, ten pounds to an acre will be sufficient.

MAMMOTH RED. Sometimes called Sapling or English Clover. It is much ranker than the Medium Clover, and yields a much larger crop per acre. It does well on poor soil, is hardy, and usually will stay in the ground longer than Medium Clover. Seed cannot be distinguished from that of Medium Red by its appearance.



Alfalfa Clover

ALFALFA. One of the most nutritious plants grown; valuable as a dried hay or for pasture. With proper cultivation it can be grown on some part of almost any farm in Pennsylvania or adjoining states. Two or three cuttings can be made in a season, producing from three to five tons of hay per acre. Ton for ton its feed value equals that of wheat bran. From twelve to fifteen pounds of seed are usually sown to the acre. Some growers sow only 10 pounds to the acre. We sell but one grade of Alfalfa seed, the very best northwestern American-grown; also Genuine Certified Grimm.

ALSIKE. One of the best for sowing with Timothy. The seed may be sown in spring, late summer or early autumn, and as the plants are perfectly hardy, the field seldom requires re-seeding. The flowers resemble White Clover, but have a

red tinge on the edge of the petals and are considerably larger. Thrives better on thin soils than Red Clover.

WHITE. White Clover is specially valuable for lawn planting and is likewise good for pasturage. When sown with Lawn Grass it helps to make a permanent turf; in the pasture it is not quickly destroyed by hoofs of cattle and horses. Seed can be sown any time during the summer, although best results are obtained from early spring sowing. It is perfectly hardy and very thrifty. Use from ten to twelve pounds to the acre if sown alone; about five pounds to the acre if sown on old sod or with other Clover.

CRIMSON. This Clover is used principally for turning under as a green fertilizer, or for sowing with corn for a winter cover-crop. If desired for feed, the plants should be cut just before they come into bloom. Seed may be sown any time after the first of April at the rate of twenty pounds to the acre. Plants are strictly annual, therefore the field must be reseeded every year. Thrives on poor land and increases fertility of the soil.

SWEET. Also known as Bokhara or Melilotus. This is a legume whose value as a soil improver is just beginning to be appreciated. It is also used for forage, but on account of its taste, the cattle take to it very slowly. It can be grown on soil that is too poor to grow other legumes, and it is claimed the bacteria on its roots will inoculate Alfalfa. It may be sown either in the spring or fall. Although a great number of different species are grown in the Old World, the two principal varieties used in this climate are the white blossom biennial (*Melilotus alba*), and the newly discovered Hubam, which is an annual, maturing the first year.

TIMOTHY

A description of this old familiar hay-making grass is unnecessary here. It is recognized by almost everyone wherever found, and is probably the most extensively grown of all the grasses. It may be sown alone or with Red or Alsike Clover, or with other grasses. From twelve to fifteen pounds of seed are usually sown to the acre.

Write us for special prices and samples of Field Seeds and Grains. Specify quantities wanted

GRASS SEEDS

BLUE GRASS. Kentucky Blue Grass is most valuable for pastures and lawn planting. For lawns it is indispensable and, when well established, the lawn will last for years, as the Grass makes an extra-close fine-textured turf. The seed should be mixed with other Grasses that mature earlier, for Blue Grass is very slow in both germinating and maturing.

ORCHARD GRASS. A quick-maturing Grass that is used for pasture and hay. It may be cut several times during the year, but it is advisable to use the machine before the plants show the seed-heads. From thirty to thirty-five pounds will be required for an acre.

RED-TOP. A valuable Grass for hay, pasture or lawn. It will grow on any soil that is not extremely dry. With the possible exception of Kentucky Blue Grass, it surpasses all other Grasses for lawn-making, and is an extra-good variety for golf-grounds and other places where the turf must withstand hard usage. About fifteen to twenty pounds of seed will be required for an acre. We handle nothing but the solid re-cleaned seed, having discarded the unhulled and chaff grades.

WOOD MEADOW GRASS. Will grow in shady places where practically no other Grass will succeed, and therefore is particularly desirable for shaded lawns. It is also desirable for mixing with golf-link Grasses, as it makes a compact turf. About thirty-five pounds of seed for an acre.

CRESTED DOG'S-TAIL. A low-growing Grass that makes extra-dense turf in rich, moist soils; is also desirable for putting-greens and lawns. Will grow equally well in the shade or the sun. About seventy pounds of seed will be required for an acre.

CREeping BENT. A superior Grass for putting-greens on account of its dwarf growth and its narrow leaves. It will grow and make good turf in good or bad soils, and dry weather or heavy rains seem to have no serious effects. About forty pounds of seed are required for an acre.

PERENNIAL or ENGLISH RYE GRASS. Where a rapid growth is desired, this is the Grass to sow, as it will make a reasonably good showing when three or four weeks old. It is extensively used in lawn seed mixtures. About seventy pounds of seed will be required for an acre.

FESCUES

HARD — RED — SHEEP'S — CHEWING'S

The above are principally used in special golf and lawn mixtures for use where unusual conditions of soil prevail. They are all adapted to poor land and stand the extremes of heat and cold better than most other grasses. From 30 to 40 pounds of seed are required for an acre.

PERMANENT PASTURE

On account of the great variation of soils and conditions, a fixed formula for a permanent pasture is not feasible in all cases. We, however, recommend the following as the mixture that will produce the best all around results:

SEED FOR 1 ACRE

12 lbs. Kentucky Blue Grass	6 lbs. Medium Red Clover
3 lbs. Re-cleaned Red Top	3 lbs. Alsike Clover
6 lbs. Timothy	1 lb. White Clover

Where there are steep, shaley, or thin soil knobs or ridges, about 8 pounds of Orchard Grass should be added to the above.

Pasture Mixtures have been, in the past, a very convenient method of getting rid of low-grade seeds, and we prefer to sell the straight seeds and let the purchaser do the mixing. He knows then just what he is getting and what the mixture contains.

MISCELLANEOUS FARM SEEDS

SOY BEANS. A valuable plant for bringing nitrogen into the soil. It is also excellent for green or dried fodder, and the seed is very rich in protein, making an excellent dairy feed when balanced with other grains. Seed should be sown during the months of May or June, using at least one bushel to the acre, when sown broadcast, or when sown in drills, $2\frac{1}{2}$ feet apart, about three pecks to the acre. We handle five varieties—**Mammoth Yellow, Early Brown, Wilson, Manchu, and Ito San.** The Early Brown and Wilson mature earlier than the Mammoth Yellow, but are smaller in growth. The Mammoth Yellow will hardly ever mature seed in the North and are usually planted for turning under.



Soy Beans

COWPEAS. One of the best soil-enrichers, taking the nitrogen from the air and storing it in the soil; valuable also for hay, forage, ensilage or turning under. They should be sown in this latitude in May or June, using, when sown broadcast, one and one-half to two bushels to the acre. Many different varieties are grown in the United States, but the most suitable for sowing in the North are the **Whippoorwill** and **New Era**.

Mixed Varieties. This mixture consists of a half-dozen or more of the leading varieties, and is usually sown for hay, pasture, or turning under. They are almost sure to make a heavy growth.

CANADA FIELD PEAS. A crop of great value and increasing in popularity every year. Used for hay and pasture as well as soil-improvement. Canada Field Peas should be sown as early as possible in the spring, either alone or with oats. When sown broadcast alone, at least two bushels of seed to the acre should be used, or with oats, one and one-half bushels of Peas and one bushel of oats.

DWARF ESSEX RAPE. Especially valuable for feeding sheep, hogs and cattle. Claimed to have a feed value greater than clover. Always used as a pasture and not for hay. Its growth is similar to turnip-tops, but heavier and taller. If seed is sown in May the field should be ready for pasture in July. However, seed may be sown either in early spring, summer or fall. If sown in drills, about five pounds of seed will be required for an acre; if sown broadcast, ten pounds to the acre.



Harvesting Alfalfa

MISCELLANEOUS FARM SEEDS, continued

WINTER or HAIRY VETCH. One of the best legumes, whether used for a hay crop, pasture, soil-improvement or cover-crop. Thrives on light soils and is very hardy, remaining green throughout the winter. May be sown in the spring or fall, using from sixty to seventy pounds of seed to the acre when sown alone. It is better, however, to furnish a support for the Vetch by sowing rye, barley or oats with it at the rate of one-half bushel of grain and fifty pounds of Vetch to the acre.

MILLET. A medium-early forage plant which will grow in almost any climate or soil and produces heavy yields of fodder. The crop should be cut while the plants are in bloom, or at least before the seed forms. Seed may be sown during the month of May or the early part of June at the rate of from thirty to forty pounds to the acre.

BUCKWHEAT. **Japanese** and **Silver Hull** are the two leading varieties. The Silver Hull produces whiter flour, but the Japanese is more productive. The Silver Hull grows particularly well on poor soil and matures a little later than the Japanese. Seed required, one to one and one-half bushels to the acre.

SORGHUM or AMBER CANE. Used principally as a summer fodder for cattle. Plants will grow rapidly and at least two crops can be cut each season. If carefully cured it will make an excellent dry fodder. The seed may be sown in drills about 30 inches apart, at the rate of five to six pounds of seed for an acre. If sown broadcast, from seventy-five to one hundred pounds of seed are generally used.

SPELTZ. Resembles wheat but the grain is much larger. Very productive and makes a fine feed for stock whether it is cut green or allowed to ripen and the grain ground. The grain is particularly good for hog- and poultry-feed.

BARLEY. A well-known, quick-growing cereal. We have the **Beardless** variety and the **Oderbrucker**.

SUDAN GRASS. This was introduced into the United States in 1909 from Africa. It is thought to be the wild original form of our cultivated sorghum. It is strictly an annual and dies each year like millet. Since its introduction into this country, it has been grown extensively in the dry regions of the West and Southwest, producing immense quantities of both seed and hay. It grows from 5 to 9 feet high, has great drought-resisting qualities, and is recommended as a substitute for millet, for a catch-crop. Once started, it will grow vigorously without rain. To secure best results, it should be planted in rows wide enough to permit of cultivation. If sown in rows, 4 to 6 pounds of seed per acre is recommended or broadcast 16 to 24 pounds per acre.

WINTER WHEAT. We can supply the leading sorts of Winter Wheat. Our stock usually consists of **Leaps Prolific**, **Pennsylvania 44**, **Red Rock**, **Forward**, and **Klondyke**. Write us for samples and prices before seeding time.

SPRING WHEAT. If your winter wheat happens to be killed by extreme cold weather, you can still secure a crop by sowing Spring Wheat in early spring. **Marquis** is the leading variety sown in Pennsylvania.

WINTER RYE. Usually sown as a cover-crop, getting the seed into the ground before the middle of November. About one and one-half bushels of seed will be required for an acre.

SPRING RYE. Matures early in the season and makes an excellent green food when cut, or will supply pasturage for several weeks. Spring Rye is quite distinct from the winter sorts, as the seeds are much smaller.

OATS

Victory. This variety was bred by Prof. Nilsson Svalof, of Sweden, who is recognized as one of the greatest seed-breeders in the world. It has been grown in western Canada for about ten years, also in parts of the western states for the past four or five years. It is a branching or tree Oat with a white characteristic gloss to the hull, which is fairly thin, showing only 27 per cent. The straw is medium fine, but very strong. It ripens early and is an enormous yielder. Victory Oat combines quality of grain with yield, strength of straw, and adaptability to a wide range of conditions. The Oat has a characteristic glossy appearance in most cases and a quite noticeable "flaxy" feel. The straw is fairly fine and makes excellent feed, at the same time is very strong, and stands a great deal of bad weather before lodging.

STORM KING. A side Oats that has been grown successfully for some years. It derives its name, Storm King, from the strength of the straw, which often measures from 4½ to 5½ feet in height. It will stand the most severe winds without lodging. Heads long, containing an unusually large number of grains; yields from 70 to 100 bushels to the acre.

SWEDISH SELECT. This variety is too well known to require a lengthy description here. The quality of the grain is unsurpassed. Very thick kernel and thin shuck. Does not have a long beard like common Oats. The straw grows to a medium height, is very stiff, and consequently seldom lodges. It has proved to be a wonderful yielder.

Write us for special prices and samples of Field Seeds and Grains. Specify quantities wanted

FIELD CORN

We have always made a specialty of Seed Corn, supplying our trade with only those varieties that experience has proved are most suitable for the climate of Pennsylvania, Ohio, and West Virginia. Our Seed Corn is carefully hand-picked and tipped and butted before it is shelled. We aim to have every variety true to name and of high germination.

BIG YELLOW DENT. The ears are immense—12 to 14 inches long, with 20 to 24 rows of long, large grains. It is, without question, one of the most valuable Yellow Dent Corns ever produced because of its immense yield—at least 25 per cent, and often 50 per cent, more bushels to the acre than any of the average yields of other varieties. Stalks grow from 12 to 15 feet high, giving an immense quantity of fodder as they are heavily covered with big, broad leaves. If you want the biggest and best crop in the neighborhood, then sow Big Yellow Dent. Plant it early in May and it will mature in September.

PENNSYLVANIA SURE-CROP. The tremendous quantity of shell Corn this variety produces to the acre surprises everyone who grows it. Generally there are two good ears to a stalk. The grain is very long, longer than any other, and the cob very thin. Sure-Crop has a rich, deep yellow grain, making it much desired by millers. The fodder grows from 8 to 10 feet high. It is an early Corn, and you are always sure of a crop.

PRIDE OF THE NORTH. A Yellow Dent variety, maturing in 90 days. Ears 8 to 10 inches long, sixteen rows on the ear, cob small, grain above medium size and closely set. One of the hardiest, and especially adapted to the northern planter; will mature farther north than any other Dent Corn.

PATTON'S IMPROVED LEAMING. The original seed of Patton's Improved Leaming Corn was purchased of J. S. Leaming, of southern Ohio thirty-eight years ago and has been grown on the Patton Farm in Lawrence County, Pa., every year since the first planting. It has become well acclimated in western Pennsylvania. It matures from 90 to 100 days. It produces a good-sized ear, with deep broad grains, which contain a large germ and shoots out a large vigorous sprout, that makes a strong, quick growth at the start. This is the secret of a good crop of Corn. A good start is half of the battle in raising a Corn crop. Patton's Improved Leaming grows a strong root and very leafy fodder, making it one of the best varieties for silage. The seed is kiln-dried and guaranteed. In a good season, Patton's Improved Leaming has yielded as high as 75 bushels of shelled Corn per acre.

WHITE-CAP YELLOW DENT. An early sort which grows well on light soil; grain is yellow with white tip. Nearly as early as Pride of the North, maturing in from 90 to 95 days. Ears from 8 to 10 inches long, well filled, with sixteen or eighteen rows.

REID'S YELLOW DENT. This variety has won many prizes in Corn shows in various parts of the country. It originated in Illinois and soon became extremely popular. The cob is medium large, with good-sized, deep grain. Matures in from 100 to 110 days.

BLOODY BUTCHER. A deep cherry-red Corn with white cap, maturing in about 90 days. Has long, slender ears, generally fourteen rows and a small cob.

ENSILAGE CORN

EUREKA. (Virginia-grown.) The Eureka is a Virginia-bred Corn and originated about twenty years ago on the rich bottom of the James River Valley where it grows to perfection, often attaining a height of 16 to 18 feet. It is a vigorous grower, large stalks, with unusually heavy foliage, and produces from one to three ears to the stalk, according to the land. The ears average about 11 inches in length. Will produce more tons of ensilage to the acre than any other variety.

BLUE MOUNTAIN. This Corn is grown at a high altitude in the Blue Ridge Mountains in Virginia, and makes an ideal ensilage Corn. Grows to a mammoth size, full of leaves, and has a big ear. It is a vigorous growing Corn, often knee-high after 30 days from planting, and grows 14 to 16 feet high. Our seed is selected in the fall, properly taken care of, and always shows nearly a perfect germination test.

LANCASTER COUNTY SURE-CROP. Lancaster County Sure-Crop holds first place in the estimation of many leading farmers. It is a yellow Corn, ears are very long and not proportionately thick. It grows quite tall, is very leafy and develops ears early. Some farmers claim that for husking purposes it is just as valuable a variety as it is for ensilage.

VIRGINIA HORSE-TOOTH. The popular fodder Corn of the southern states; from 12 to 14 feet high, and stiff enough to stand up during severe storms. The seed is white, broad, and deep, with white cob.

RED-COB. A tall-growing plant, with a quantity of side leaves, making it desirable for ensilage. A favorite with a great many growers. The grain is narrow and clear white.



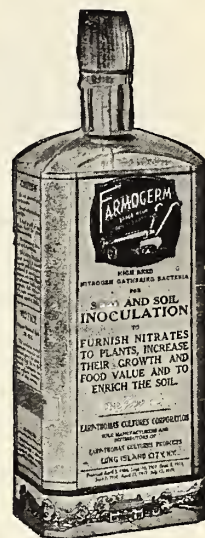
Pennsylvania Sure-Crop Corn

Our aim has always been to furnish High-Quality Seeds rather than to sell inferior seeds at low prices.

Write us for special prices and samples of Field Seeds and Grains. Specify quantities wanted

THE STANDARD INOCULATION FARMOGERM

HIGH-BRED NITROGEN-GATHERING BACTERIA for
CLOVERS, ALFALFA, BEANS and OTHER LEGUMES

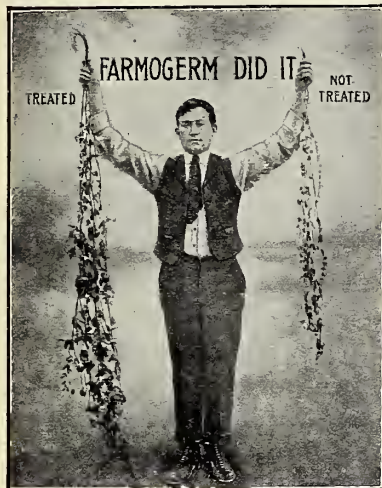


A Seed Inoculant That Increases Crop Production

Seeds of all legumes—beans, peas, clover, alfalfa, and related crops—will produce far better if inoculated with **Farmogerm**. In addition to the increased crops, these legumes leave in the soil a heavy deposit of nitrogen which benefits all succeeding crops. Gardeners and farmers who have used **Farmogerm** would not be without it.

Farmogerm is the "Always Fresh" Seed Inoculant

Because of the method of sealing the bottle—a patented stopper which admits filtered air and keeps out all impurities—**Farmogerm** is just as good in three or four years as when first bottled. The bacteria in **Farmogerm** and other inoculants of like character are living organisms, feeding on nitrogen in the air—without air, they cannot live. If tightly sealed, the bacteria gradually become weaker and weaker until they are worthless. That is why many inoculants have to be replaced before they are six months old.



USE FARMOGERM

OR
Legume Inoculation
HUMOGERM
FOR

Bush Beans
Pole Beans
Lima Beans
Soy Beans
Sweet Peas
Garden Peas
Field Peas
Cowpeas
Vetch
Alfalfa Clover
Red Clover
Alsike Clover
Sweet Clover
Crimson Clover
Japan Clover

In ordering Farmogerm or Humogerm,
specify kind of seed to be inoculated

Legume Inoculation HUMOGERM

Farmogerm bacteria carried in a specially prepared, finely ground, porous humus medium in ventilated friction top cans, for those who prefer a dry to a jelly medium.

It is guaranteed to give the uniformly good results obtained from Farmogerm and is sold on the bushel basis, good for one year from date of manufacture.

NEW LOW PRICES POSTPAID

FARMOGERM OR HUMOGERM

For small seeds—All Clovers including Alfalfa

1/4-bus. size.....	\$0 35	1- bus. size.....	\$1 00
1/2-bus. size.....	60	2 1/2-bus. size.....	2 25
10-bus. size.....	\$8 00		

For large size seeds—All kinds of Beans, Peas, Soy Beans, Vetch and Cowpeas.

1/2-bus. size....	\$0 35	1-bus. size....	\$0 60
5-bus. size.....	\$2 25		

Special garden sizes for garden Peas, Beans, and Sweet Peas, 25 cts. You'll get more peas and beans, and larger sweet peas by using this.

Farmogerm and Humogerm

Will increase the yield and quality of legume crops, giving quicker growth and earlier maturity. These cultures will increase the food value of legumes and enrich the soil for future crops, thereby increasing the permanent value of the farm.



FERTILIZERS

What the Crop Needs. We need to bear in mind that the great object of fertilizing is to feed the crop and not to feed the soil, and in determining what the different crops need it is important to understand the purposes served by the different elements. We are all familiar with the fact that nitrogen, phosphoric acid and potash are the three critical or vital elements of plant-food. The functions or uses of these plant-food elements are as follows:

Uses or Purposes of Nitrogen. Nitrogen builds up the young tissues in the new and rapidly growing parts of the plant, and is one of the chief constituents of the living matter with which the minute plant-cells are filled. It increases the amount of protein, which is the muscle-making and strength-giving element of the plant when used as food. It promotes a healthy growth, gives a good green color to the foliage, and in general has a tendency to give a greatly increased growth of stems and leaves. Thus we see the necessity for using nitrogen in abundance on the grass crop, which is valued chiefly for its leaf and stem; also for such crops as lettuce and spinach, valued for their leaves, and it should also be used in abundance on crops where rapid new growth is essential, such as asparagus, rhubarb, tomatoes, etc.

Uses or Purposes of Phosphoric Acid. Phosphate of lime (consisting of phosphoric acid and lime) forms a large part of the

framework of plants, just as it forms the chief constituent of the bones of the human skeleton. Plants lacking phosphoric acid die before reaching maturity. Phosphoric acid also nourishes the seeds of the plant (where it is present in great abundance) and hastens the plant's growth to maturity. It is especially used in large amounts by plants belonging to the cabbage family, including cabbages, turnips, brussels sprouts, cauliflower, kale, rape and mustard, and also by cereal crops such as wheat, barley, rye, oats, etc.

Uses or Purposes of Potash. Potash is concerned especially with the formation of starch and sugar in plants and also with the development of the fleshy part of fruits, fruit juices, and fruit acids. It is of great importance to corn, potatoes, beets, tobacco, strawberries, grapes, apples, and also to the leguminous crops such as clover, alfalfa, peas, beans, etc. The reason for this is very evident when you reflect that the greater part of a kernel of corn is starch, and that a potato is made up very largely of starch and water.

In the manufacture of the following Fertilizers, all these important facts are carefully borne in mind, and it is our object to furnish our customers such Fertilizers as shall produce the largest crops at the least possible cost to the consumer.

E. Frank Coe's Fertilizers

1857 — The Business Farmer's Standard for Over 69 Years — 1927

For more than sixty-nine years we have specialized in the manufacture of high-grade fertilizers particularly adapted to the soil and crop conditions of the northeastern United States. There are sixty-eight years of laboratory work, factory experience, practical farm tests, and thorough scientific knowledge behind every bag of E. Frank Coe's Fertilizers. We manufacture a large assortment of brands which are formulated especially to meet western Pennsylvania requirements.

Our Service Department will gladly recommend the brands which we believe will give you the greatest possible profit if you will indicate to us the type of your soil and the crops which you wish to grow.

A series of helpful booklets is offered without charge to interested farmers. The I. W. Scott Company, our western Pennsylvania agents, or our Buffalo office will be pleased to furnish you with any of the following:

- "Corn: The Foundation of Profitable Farming"
- "Potatoes: A Money Crop"
- "The Neglected Hay Crop"
- "Better Vegetable Growing"
- "Oat Production"
- "How to Get the Most Out of Fertilizer"
- "Winter Wheat and Its Culture"

To secure maximum profits under present conditions, the farmer must strive to secure bigger crops at less cost. E. Frank Coe's Fertilizers will help you to secure at minimum cost, "A Greater Yield from Every Field."

The American Agricultural Chemical Company

Successor to THE COE-MORTIMER COMPANY

129 LEWIS STREET, BUFFALO, N. Y.

Our limited space will not permit of detailed descriptions of the different brands here. We can give only analyses and prices. Full descriptive circulars, giving detailed descriptions of the different brands and other valuable information, will be mailed free.

Special Prices on Fertilizers

On orders for ton and half-ton lots for shipment on arrival of cars in February and March, a reduction of \$2 per ton will be allowed. Orders must be in by March 15, to secure this special reduction.

This reduction also applies to Sheep Manure on next page.

E. Frank Coe's Red Brand Fertilizer

A high-grade Fertilizer for Truckers. (4-8-7.)

GUARANTEED ANALYSIS		Per cent
Nitrogen	.....	3.29
Equal to Ammonia	.....	4.00
Available Phosphoric Acid	.....	8.00
Potash (Water soluble)	.....	7.00
In 125-lb. bags		
125 lbs.	.....\$3 50	1,000 lbs....\$22 25
500 lbs.	.....11 75	2,000 lbs.... 42 50

E. Frank Coe's Gold Brand Fertilizer

For market-gardeners. (3-10-6.)

GUARANTEED ANALYSIS		Per cent
Nitrogen	.....	2.47
Equal to Ammonia	.....	3.00
Available Phosphoric Acid	.....	10.00
Potash (Water soluble)	.....	6.00
In 125-lb. bags		
125 lbs.	.....\$3 35	1,000 lbs....\$21 00
500 lbs.	.....11 00	2,000 lbs.... 40 00

E. Frank Coe's Columbian Fertilizer

For corn and potatoes. (2-8-5.)

GUARANTEED ANALYSIS		Per cent
Nitrogen	.....	1.65
Equal to Ammonia	.....	2.00
Available Phosphoric Acid	.....	8.00
Potash (Water soluble)	.....	5.00
In 125-lb. bags		
125 lbs.	.....\$3 10	1,000 lbs....\$18 50
500 lbs.	..... 9 75	2,000 lbs.... 35 00

E. Frank Coe's Antler Fertilizer

For wheat, rye, and oats. (1-9-4.)

GUARANTEED ANALYSIS		Per cent
Nitrogen	.....	0.82
Equal to Ammonia	.....	1.00
Available Phosphoric Acid	.....	9.00
Potash (Water soluble)	.....	4.00
In 125-lb. bags		
125 lbs.	.....\$2 85	1,000 lbs....\$17 00
500 lbs.	..... 9 00	2,000 lbs.... 32 00

E. Frank Coe's 16 Per Cent Acid Phosphate

Sixteen per cent available phosphoric acid. Very quick-acting and permanent.

In 125-lb. bags		
125 lbs.	.....\$2 25	1,000 lbs....\$12 25
500 lbs.	..... 6 75	2,000 lbs.... 22 50

Bone-Meal Fertilizer

We guarantee this brand to be manufactured strictly from slaughter-house bone.

GUARANTEED ANALYSIS		Per cent
Ammonia	.....	4.50
Phosphoric Acid	.....	21.00
Equal to Bone Phos.	.....	45.88

In 100-lb. bags

100 lbs.	.....\$3 00	1,000 lbs....\$25 00
500 lbs.	.....13 00	2,000 lbs.... 48 00

Lawn and Greenhouse Bone-Meal

Pure; ground very fine. Especially adapted for greenhouses and lawns. Made from selected bones.

GUARANTEED ANALYSIS		Per cent
Ammonia	.....	4.50
Phosphoric Acid	.....	22.00
Equal to Bone Phos.	.....	48.07

In 100-lb. bags

4 lbs.	.....\$0 25	100 lbs....\$3 25
9 lbs.	..... 50	500 lbs....13 75
25 lbs.	..... 1 00	1,000 lbs....26 50
50 lbs.	..... 1 85	2,000 lbs....51 00

Nitrate of Soda

Fifteen per cent nitrogen, equivalent to over 18 per cent ammonia. 1 lb. 15 cts., 5 lbs. 60 cts., 10 lbs. \$1.

In 167-lb. bags

100 lbs.	.....\$5 00	1,000 lbs....\$36 00
167 lbs.	..... 6 75	2,000 lbs.... 70 00
500 lbs.	.....18 50	

Sulphate of Ammonia

In 200-lb. bags

2-lb. Box	.....\$0 35	100 lbs....\$4 75
5-lb. Bag	..... 65	600 lbs....22 20
10-lb. Bag	..... 1 25	1,000 lbs.... 36 00
25 lbs.	..... 1 75	2,000 lbs.... 70 00

Muriate of Potash

Imported, guaranteed 48 per cent K₂O. 1 lb. 15 cts., 5 lbs. 60 cts., 10 lbs. \$1.

In 200-lb. bags

100 lbs.	.....\$4 00	1,000 lbs....\$27 50
200 lbs.	..... 6 50	2,000 lbs.... 53 00
600 lbs.	.....18 00	

Unleached Hardwood Ashes

A proper and liberal use of good Hardwood Ashes will restore worn-out lands to prime fertility, preserve grasslands through severe drought, and give trees, plants and vines renewed vigor. 1 bbl. (200 lbs.) \$3.50; 5 bbls. (1,000 lbs.) \$16.50; 10 bbls. (2,000 lbs.) \$31. Special prices on carload lots.

"Star Brand" Lime

Specially prepared for garden, lawn, sanitary, and whitewashing purposes.

5-lb. pkg.	.....\$0 25	Postpaid \$0 40
10-lb. pkg.	..... 45	65
25-lb. pkg.	..... 90	1 25

Prices on larger quantities quoted on request.

Agricultural Gypsum

Agricultural Gypsum (land plaster) is an untreated, ground, natural rock fertilizer, consisting mainly of hydrated calcium sulphate. It therefore bears two essential plant foods, calcium and sulphur.

Gypsum furnishes sulphur to crops in an immediately available and neutral form—in exactly the form that sulphur is supplied to plants in nature.

Uses for White Rock Agricultural Gypsum

Lawns—to promote luxuriant growth and rich color.

Peas, Beans, Peanuts, and other Legumes—to furnish an essential plant-food.

Cabbages, Turnips, Radishes, and Onions—to form their characteristic flavors.

Tobacco, Tomatoes and Potatoes—to furnish a required plant-food and release potash in the soil; also to prevent potato scab.

Alfalfa and Clover—to greatly increase the yield and quality.

Poultry-Houses—to render them more sanitary by sprinkling agricultural gypsum on dropping-boards and floors.

Barn-Manure—to trap the ammonia of the manure by sprinkling agricultural gypsum about the stalls, in the drains, and on the manure-piles.

Impoverished Soils—to replenish them with sulphate sulphur.

Dust Sprays—to serve as a carrier of insecticides, such as paris green, calcium arsenate, etc.

Amount of Agricultural Gypsum to apply as a plant-food, 200 to 400 pounds an acre; for potato scab control, 800 to 1,000 pounds an acre.

Put up in 80-lb. paper bags

10 lbs.	.....\$0 25	480 lbs....\$5 25
25 lbs.	..... 50	960 lbs.... 9 50
80 lbs.	..... 1 00	2,000 lbs....18 00

Ask for booklet "How and Why of Gypsum."

Thomasville Ground Limestone

Thomasville Ground Limestone is the best on the market, on account of its unusual softness which makes it very soluble. Also because it runs uniform, never falling below 97 per cent combined carbonates of lime.

In 100-lb. sacks

100 lbs.	.....\$1 00	1,000 lbs....\$7 00
500 lbs.	..... 4 00	2,000 lbs....13 00

5 tons, \$12 per ton

Carload—20 tons or upward, in bulk, per ton f. o. b. quarry, \$2.50.

Hydrated Lime

Made from a high-calcium Limestone, which is burnt in a kiln, ground to the proper fineness, put through a process of hydration, screened and packed in 50-pound sacks. As it is not a hot Lime, it is not disagreeable to handle, and entirely safe to store without danger of creating a fire. Can be kept indefinitely without deteriorating in quality. It is a light gray or cream color.

50-lb. bag	.....\$0 65	500 lbs....\$5 50
100 lbs.	..... 1 25	1,000 lbs....10 00
		2,000 lbs. \$18

Ask for delivered prices in carload lots

Prices are f. o. b. cars Pittsburgh. Ask for Special Prices in Carload Lots

Wizard

TRADE BRAND MARK

Sheep Manure



Makes All Plants Grow!

Wizard is a natural concentrated manure that produces big crops and makes all plants grow to perfection. It is free from straw and rubbish, with all weed seeds killed. This natural fertilizer makes hard, worn-out soils rich and fertile. It supplies the humus and natural plant-food that puts new life and beauty into all plants.

Everybody can get wonderful results with Wizard because it is easy to apply and will not burn plants. It is most economical—one big 100-pound bag equals a whole wagon-load of stable manure.

LAWNS. Wizard produces a thick, velvety green lawn of lasting beauty. In making new lawns, broadcast 10 pounds to 100 square feet and rake into the surface soil. On old lawns use 6 to 10 pounds per 100 square feet. Use Wizard this spring and watch the new beauty it will develop.

FLOWERS AND SHRUBS. Luxuriant green foliage and a wealth of vivid-colored flowers quickly follow the use of Wizard. Fine for vines, shrubs, and trees. Mix well with the soil under new plantings and cultivate into the surface soil around established plants.

VEGETABLE, FRUIT, AND FIELD CROPS. Every successful gardener knows that nothing equals manure for producing big crops of crisp, tender vegetables. Wizard also improves yield, color, and flavor of fruits. It drills freely and is a practical soil-building fertilizer for field crops. Use 500 to 1,000 pounds per acre.

FLORISTS. Wizard is unexcelled for feeding plants grown under glass. It is weedless; safe and dependable for all plants. It pays to use Wizard if you want big crops of high quality.

ASK FOR FREE CIRCULAR

		Postpaid	
2 lbs.....	\$0 15	\$0 25	50 lbs.....\$1 50
5 lbs.....	25	40	100 lbs..... 2 50
10 lbs.....	45	65	500 lbs.....11 00
25 lbs.....	90	1 25	1,000 lbs.....20 50
	2,000 lbs.....		\$40.00

PRICES IN CARLOAD LOTS QUOTED ON REQUEST



Should Be Included in Every Order

No matter how large or small your plantings may be, nor how good your soil, you will get far better results with the use of a complete fertilizer. **OLD GARDENER** is economical and fills every need. Be sure to include it in your order.

Old Gardener

COMPLETE FERTILIZER FOR EVERYTHING THAT GROWS

OLD GARDENER is a complete, quick-acting fertilizer, containing in concentrated form the plant-foods and soil-sweeteners used by professional gardeners and florists. It stimulates all plants into quicker and more vigorous growth, increases production, and sweetens and refreshes the soil.

OLD GARDENER is particularly effective on lawns, being quick-acting as well as permanently beneficial. In the garden it produces larger, finer crops of vegetables and larger, brighter colored flowers. Being clean and odorless, it is especially adapted for indoor use, and produces amazing results with ferns, pot-plants, and window-boxes.

Odorless · Clean · Easy to Use

There is no need of using coarse, odorous fertilizers on lawns and gardens. **OLD GARDENER** is absolutely clean and odorless, and contains every element needed for healthy plant-growth—3 per cent available ammonia, 10 per cent available phosphoric acid, and 4 per cent available potash minimum guaranteed; also contains over 20 per cent of soluble marl lime, making it doubly beneficial as a fertilizer and soil-corrective.

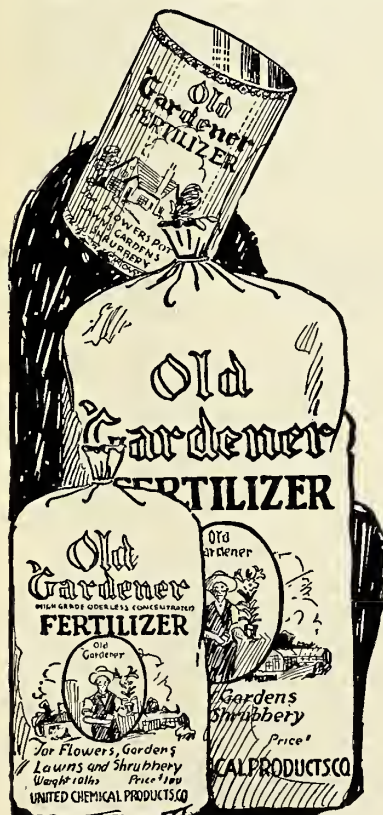
Comes in Six Convenient Sizes

OLD GARDENER is put up in tight cans and bags in the following handy sizes:

		Postpaid			Postpaid
1-lb. can.....	\$0 25	\$0 35	25-lb. bag.....	\$2 00	\$2 35
5-lb. bag.....	65	80	50-lb. bag.....	3 50	
10-lb. bag.....	1 00	1 20	100-lb. sack.....	5 50	

On the basis of actual plant-food contained, **OLD GARDENER** is the cheapest complete fertilizer you can buy.

Ask for leaflets on the care of House Plants, Lawns, and Gardens.



MORE-CROP MARL LIME MAKES SOUR SOILS PRODUCTIVE

Practically all soils in the northeastern United States are deficient in lime, but, even though not classed as definitely sour, they are greatly increased in fertility by the application of lime in the proper form.

MORE-CROP MARL LIME is made from fresh-water Marl, which is limestone at one time dissolved and then reprecipitated. It is the most soluble form of lime, and the only lime suitable for home mixing of fertilizer. It is the safest and most effective form of lime for use on lawns and home gardens. Guaranteed to be non-caustic: will not burn humus in the soil or injure tender roots.

Apply two to three tons of **MORE-CROP MARL LIME** to the acre, depending on condition of soil. On lawns and gardens, apply 125 pounds to each 1,000 square feet, either in early spring or late fall.

10-lb. paper sack....	\$0 35	500 lbs.....	\$5 00
50-lb. bag.....	65	1,000 lbs.....	9 00
125-lb. bag.....	1 40	2,000 lbs.....	16 00

Write for special quotation on car lot (25 tons) or more.

A Clean, Odorless, Disease-Free Substitute for Manure

Free from Weed Seed. Entirely Unlike Any Domestic Product

IMPORTED GRANULATED PEAT MOSS TORF MULL

A great soil-improver. No matter how much chemical fertilizer may be applied, plants will not thrive in soil unless it contains an abundance of organic matter or humus.

This material is light and dry, vegetation which has been decomposing for years. Its use is a quick way to add humus to the soil. Makes heavy soil light, friable, giving better drainage. Makes light soil more retentive of moisture. Supplies nitrogen to plants throughout the growing season and increases the action of necessary, beneficial soil bacteria. Turn under liberal quantities.

Useful for mulching in the flower and vegetable-garden. Invaluable for Rhododendrons, Kalmias, Ferns, Evergreens, Blueberries. For lawns, sprinkle over the lawn several times during the season, giving a heavy coating for winter.

Peat Moss is extensively used by leading florists, also for mixing with potting soil, for propagating benches, for covering greenhouse benches in place of sand or ashes, packing bulbs and plants.

Trial bales, for small gardens, house plants, etc., sufficient to cover 16 square feet, 1 inch deep, \$1.50; postpaid \$1.60.

Large, compressed bales, weighing from 180 to 200 pounds, sufficient to cover 240 square feet 1 inch deep, \$4; 5-bale lots \$3.75 per bale. F.O.B. Pittsburgh.



STIM--PLANT

PLANT STIMULANT TABLET

Trade-Mark Registered in U. S. Patent Office

An All-the-Year Fertilizer for Garden and House Plants

Growers of fine flowers, shrubs and vegetables for the best markets and for exhibition, fertilize and stimulate them frequently, a little at a time. An excellent fertilizer for this purpose is Stim-U-planT, an odorless, highly concentrated plant-food, in tablet form, with guaranteed balanced chemical analysis of 11 per cent nitrogen, 12 per cent phosphoric acid, 15 per cent potash. The proportions are accurate, there is no unnecessary filler, and in this form you are able to apply plant-food exactly when and where and as needed.

TABLET FORM OF GREAT VALUE

1. They give an EXACT FEEDING UNIT.
2. No MESSY MIXING.
3. No UNPLEASANT ODOR.
4. MAXIMUM EFFICIENCY because no food-value lost in scattering, leaching, or run-off of soil surface-water.
5. Makes REPOTTING of plants UNNECESSARY as it replaces the food withdrawn by the growing plant.

EASY TO USE

Simply insert tablets in soil about 3 inches from stem of plant, or dissolve in water at the rate of four tablets to the gallon and apply as liquid manure. Complete directions with every package.

STIMUPLANT
Makes a
WONDER GARDEN

Order STIM-U-PLANT tablets with your seed and plant order. Prices, postpaid: 10 tablets 15 cts., 30 tablets 25 cts., 100 tablets 75 cts., 1,000 tablets \$3.50.

Hoover's Plantlife

JUST MAKES PLANTS GROW

A scientific preparation embodying all necessary ingredients to feed plants. A small amount dug into soil from three to four times a year is sufficient. You, too, can have beautiful ferns and house plants by using a little Hoover Plantlife, the *dry plant-food*.

Is a life-giver to the potted plant or flower in the sunny window or in the garden.

Promotes growth, health, and vigor in plants of all kinds. Full directions with each can.

Price, 6-oz. can, 35 cts., postpaid 45 cts.

ADCO

FOR MAKING ARTIFICIAL MANURE

Dry leaves, mixed with ADCO and kept moist, turn into excellent manure. So do flower-stalks, cuttings, pea-vines, and almost any other kind of non-woody vegetable waste.

ADCO is a powder which, mixed with vegetable matter and kept moist, turns the latter into *Real Manure*, but without the odor, flies, etc. The process is perfectly simple and not at all laborious. The method is being generally adopted by gardeners, who know that manure is a necessity to the soil and can no longer be obtained from stables. Farmers can use straw, corn stalks, etc., and need no longer maintain live stock.

PRICE

25-lb. bags (enough for about twelve wheelbarrow loads of garden waste, making $\frac{1}{2}$ ton of manure), each \$2, postpaid, \$2.35.

150-lb. bags (enough for a heap 10 x 10 x 6 feet making about three tons of manure), each, \$10.50.

Each shipment is accompanied by simple directions, which make any mistake impossible

FARM AND GARDEN BOOKS. See page 207 for our list of the best Farm and Garden Books; Poultry Books, page 208

INSECTICIDES AND FUNGICIDES

The Insecticides and machines for applying the same, described in this catalogue, are not novelties in the experimental stage, but have been thoroughly tested and found reliable for the uses for which they are intended.

Customers using large quantities of Insecticides are requested to write to us for special prices, specifying the quantities wanted. Prices quoted are subject to change.

A Still Better

Pyrox
REG U S PAT OFF.
TRADE MARK REGISTERED

**STILL EASIER TO USE
STILL MORE EFFECTIVE**

Bowker's Pyrox is the last word in a scientific compound to protect plants from insects and blights. For over a quarter-century Pyrox has been known as the handiest and most efficient spray material on the market. And now, due to advanced manufacturing methods, Pyrox is even better than ever. There is simply nothing else like it.

Smooth as fine paint, always soft and plastic, Pyrox is ready for instant use. No fuss or muss. No guesswork, nor weighing and mixing different materials. Simply dip this creamy paste out of the jar or can. Add cold water. Stir. That's all. At once you have a perfect mixture that sprays, mist-like, and lays a protective film over the whole plant.

Insects, worms, and bugs simply can't live where Pyrox is sprayed. Blights, rusts, and rots can make no progress. Due to the secret process of blending the deadly poison with the powerful fungicide extra high in copper, Pyrox not only saves your plants, but improves them—makes them sturdier and stronger—lengthens the growing period—which increases the yield and enriches the quality. And because it *sticks like paint* frequent sprayings are unnecessary.

Use Pyrox especially for potatoes, tomatoes, cucumbers, melons, cabbages, peppers, eggplants, berries, small fruits, shrubs, and flowers.
1-lb. jar 50 cts., 5-lb. drum \$1.75, 10-lb. drum \$3, 25-lb. drum \$6.25, 50-lb. drum \$10.75, 100-lb. drum \$15.50, 300-lb. bbl. \$43.50



Bowker's Powdered Arsenate of Lead

This is the result of thirty years of manufacturing this product—a longer experience than that of anyone else in the business. Bowker's can be used either as a spray or as a dust for all leaf-chewing worms and insects. It will not burn or injure your crop. Unlike ordinary brands,

Bowker's mixes easily, stays well in suspension, is so finely divided that you get an even distribution, with no trouble from clogged nozzles and sticks to the foliage through heaviest rains. In choosing Bowker's you obtain unusual efficiency at no additional cost. 1/2-lb. pkg. 30 cts., 1-lb. pkg. 50 cts., 4-lb. pkg. \$1, 25-lb. pkg. \$5.50, 100-lb. pkg. \$22.



Bowker's Lime-Sulphur

Dry and Liquid

Dry Lime-Sulphur does not have the same disagreeable features as the Liquid and is now generally accepted by fruit-growers everywhere. It is used as either a dormant spray to kill scale or as a summer spray to control fungous diseases, such as scab, rot, etc. 1-lb. pkg. 35 cts., postpaid, 45 cts.; 5-lb. pkg. \$1.25, postpaid, \$1.40; 10-lb. pkg. \$2.25, postpaid, \$2.50; 25-lb. pkg. \$4.50, postpaid, \$4.90; 50-lb. pkg. \$7.25, 100-lb. pkg. \$12.75.

Bowker's Liquid Lime-Sulphur (concentrated) is prepared from the highest grade of lime and the purest sulphur, combined in especially designed apparatus, and in quantities so large as to allow plenty of time for storage and settling. Thus the solution which reaches you is cherry-red in color, clear and sparkling. It will not crystallize, thicken up in the barrel, nor clog the finest nozzles. If used according to directions, Bowker's Lime-Sulphur is *guaranteed to kill every scale that it touches*. 1-qt. can 40 cts., postpaid 55 cts.; 1-gal. can 90 cts., postpaid, \$1.20; 5-gal. can \$3.25, 30-gal. bbl. \$9, 50-gal. bbl. \$12.

Copper Sulphate (Blue Vitriol)

Used for making Bordeaux Mixture solution. Lb. 20 cts., 5 lbs. 75 cts., 10 lbs. \$1.25, 50 lbs. \$4.50, 100 lbs. \$8, 450-lb. bbl. \$31.50.



Bowker's Calcide

High-Grade Calcium Arsenate

Bowker's Calcide is prepared under the personal supervision of G. R. Riches, who originated Calcium Arsenate. His efforts, coupled with those of the U. S. D. A. were principally responsible for the perfection of this economical and effective insecticide. Although formerly used only in the South to kill the cotton boll weevil, Calcide is fast supplanting arsenate of lead and paris green in other sections to kill such pests as potato bugs, tobacco worms, bean and melon beetles, etc. It is one-third stronger, quicker and cheaper than arsenate of lead, far safer and only one-half as expensive as paris green. Calcide may be applied either wet or dry. 1-lb. pkg. 30 cts., 4-lb. pkg. 90 cts., 25-lb. pkg. \$4.

Commercial Flour Sulphur

For use in making lime-sulphur solution and for dusting. Lb. 10 cts., 5 lbs. 40 cts., 10 lbs. 60 cts., 25 lbs. \$1.25, 50 lbs. \$2, 100 lbs. \$3.25, 500 lbs. \$15.50.



Bowker's Powdered Bordeaux Mixture

Bowker's Powdered Bordeaux is a powerful fungicide for the control of blights, rusts, and rots, or any crops where Bordeaux is recommended by the experiment stations or other agricultural authorities. Fine, light, and fluffy, Bowker's Bordeaux mixes easily and completely. Hence it covers evenly and sticks well to the foliage. When bugs or worms are present, use Bowker's Pyrox in place of Bordeaux, as Bordeaux contains no poison. 1-lb. carton 40 cts., postpaid, 50 cts.; 4-lb. pkg. 90 cts., postpaid, \$1.05; 25-lb. pkg. \$4, postpaid, \$4.40.

"An ounce of prevention is worth a pound of cure" applies to the use of insecticides. Get the bugs before they get your plants.

SCALECIDE

THE COMPLETE DORMANT SPRAY

"Makes a Tree Outgrow Its Troubles"

Since 1904, Scalecide has been the paramount spray for scale control. It is the oldest commercial dormant spray on the market. Moreover, its reputation has been enhanced by each passing year. *It is the complete dormant spray.* Scalecide controls pear psylla, when applied in the fall, by killing the adults before they lay their eggs. (After they have laid their eggs in the spring it is too late.) It controls aphids, too, when applied in the spring as a delayed dormant spray. Leaf-roller, bud-moth, case-bearer, collar- and root-rot are other pests that this complete dormant spray will take care of. It spreads so readily that it covers every part of the trunk and branches of the tree, gets into the cracks and crevices, and completely smothers insects and eradicates disease.

Those who have used Scalecide and lime-sulphur side by side for several years claim that Scalecide gives a greater yield of fruit—in one case, 58 per cent more. Even a 2 per cent increase over the average yield will pay the entire cost of spraying with Scalecide, including material, labor, and depreciation of apparatus. Profitable crops can be grown only on healthy and vigorous trees.

How true it is in orchard work as it is in every-day life,



1 qt.	\$0 75	Postpaid	\$0 90
1-gal. can	1 75		2 05
5-gal. can	6 25		
10-gal. can	10 60		
15-gal. drum \$11.50. Drum extra \$2.	13 50		
Cost of drum will be refunded when returned to B. G. Pratt Co., Hackensack, N. J., prepaid			
50-gal. bbl.	38 00		

ASK FOR SCALECIDE BOOKLET

SULFOCIDE

A Better Summer Spray

The experienced fruit-grower does not need to be told of the need for a better summer spray. He knows that not one of the common fungicides fully meets his requirements. For instance, Bordeaux cannot be used on peaches and it may russet apples. Commercial lime-sulfur is not suitable for peaches and may have a tendency to devitalize the foliage and dwarf the fruit.

Sulfocide does not have these disadvantages and can be used on both peaches and apples. When sprayed, it quickly decomposes, leaving a film of extremely fine sulfur.

Sulfocide can be used alone or in combination with Cal-Arsenate, Kayso and Cal-Arsenate, or Kayso and Arsenate of Lead. Nicotine may also be added to any of these combinations. Do not use Sulfocide in combination with Arsenate of Lead without adding Kayso to the water in the spray-tank first. The method of procedure is to fill the spray-tank with water, put in the required amount of Kayso, then put in the Arsenate of Lead and lastly put in the Sulfocide. Use the amount of Arsenate of Lead you have found most

"An ounce of prevention is worth more than a pound of cure." And how simple is a small amount of Scalecide applied regularly each year, in comparison to the tons and tons of spray materials, fertilizer, and honest sweat needed to bring an orchard back from the ravages of scale, pear psylla, aphids, and the like.

One San José scale may multiply to many millions in a single season; the first brood of aphids is not only destructive, but, furthermore, is often impossible to effectively control when protected by the curling leaves. The regular annual application of Scalecide prevents a host of insects and diseases from getting a start in your orchard that may otherwise cause serious damage.

Reduces the Cost of Labor

Though Scalecide costs more per gallon than lime-sulphur this is much more than offset by the saving of material and labor. One barrel of Scalecide, making 800 gallons of spray, will cover, until they drip, as many trees as three and a half barrels of lime-sulphur, which make 1,600 gallons of spray. And of course you can apply 800 gallons of Scalecide in much less time than 1,600 gallons of lime-sulphur.

PRICES

1-pint can	\$0 70	\$0 80	10-gallon can.	\$15 00
1-quart can ...	1 00	1 15	30-gallon bbl.	39 00
1-gallon can ...	2 75	3 05	50-gallon bbl.	60 00
5-gallon can ..	8 75			

PRICES

Ppd.

Black Leaf 40

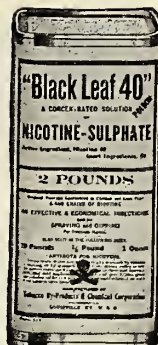
40% Nicotine

Kills
Aphis

Black Leaf 40 is highly recommended by experiment stations and by spraying experts throughout the United States and the Dominion of Canada.

The standard contact insecticide for spraying vegetables, fruits, flowers, and plants to destroy aphids, thrips, leafhoppers, and similar "sucking" insects. Also effective for dipping purposes. Full directions with every package.

1-oz. bottle....\$0 35 | 2-lb. can...\$3 50
 1/2-lb. can.....1 25 | 10-lb. can...13 50



"NICO-FUME"

PRODUCTS
Liquid—Paper—Powder

FOR GREENHOUSES

Nico-Fume Liquid

A highly refined solution of free nicotine, guaranteed to contain fully 40 per cent of nicotine. Extensively used by leading florists for spraying or vaporizing in greenhouses to destroy aphids, thrips, etc. The labels contain complete directions. 1/4-lb. tin, 75 cts., 1-lb. tin \$2.25, 4-lb. tin \$8, 8-lb. tin, \$15.

Nico-Fume Tobacco Paper

Consists of sheets of paper impregnated with high-strength nicotine, folded and punched, ready to hang up and burn. Guaranteed to contain not less than 20 per cent of nicotine; its original nicotine content (when manufactured) being much higher. The labels contain complete directions. 24 sheets \$1.25, 144 sheets \$5.50, 288 sheets \$10.

Nico-Fume Tobacco Powder

Tobacco Powder impregnated with a high strength nicotine solution. Effective for fumigating in greenhouses to destroy aphids, thrips, etc. The directions and illustrations are set forth on the labels. Lb. \$1.25, 5 lbs. \$4.75, 10 lbs. \$8.50.

Tobacco Dust

A specially ground Tobacco Dust, guaranteed full 1 per cent nicotine strength ground to an impalpable powder, ready to use. It is particularly useful in vegetable and flower-gardens, in greenhouses and orchards, wherever a dusting powder is desired to destroy plant-lice and thrips. Owing to its extreme fineness it readily floats in the air, enveloping the entire shrub or tree in a dense cloud. 2-lb. bag 30 cts., postpaid 40 cts.; 100-lb. sack \$4.75.

Tobacco Stems

Bale (about 90 lbs.) \$2, 3 bales \$5.25, 10 bales \$15.

Key Brand Paris Green



For use against potato bugs, tobacco worms, etc. Strictly pure Paris Green with the maximum amount of combined arsenic and a minimum of soluble or uncombined arsenic. Reliable and effective in killing bugs with a minimum danger of burning foliage. Contains 50 per cent arsenous oxide and less than 3.5 per cent soluble in water.

1/4-lb. pkg.\$0 20 | 5-lb. pkg...\$2 00
 1-lb. pkg. 50

Key Brand Fish Oil Soap

For destruction of sucking insects and lice on plants and trees; also essential as a spreader of nicotine sprays. Dissolve 1 pound Fish Oil Soap in 2 quarts of hot water, then add 8 to 10 gallons of cold water and apply with watering-pot or sprayer. It may also be applied to trunks of trees and branches with a brush. One pound makes 8 to 10 gallons. Contact insecticide for soft-bodied insects.



Postpaid
 1-lb. pkg.\$0 40 \$0 50
 5-lb. pkg. 1 75 1 90

Key Brand Powdered Hellebore



For the destruction of slugs, worms, caterpillars, etc. Less poisonous than Paris Green or arsenate of lead and safer to use when fruits and vegetables are nearly ripe. Apply powder just as it comes from package. Made from white hellebore roots.

1/2-lb. box.\$0 35
 1-lb. box. 60

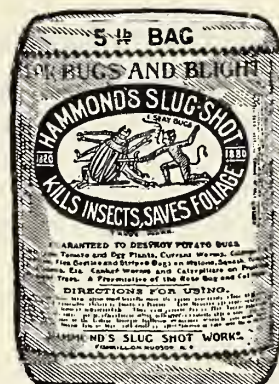
Melrosine

Why Raise Roses to Feed Bugs?

Melrosine, the only remedy endorsed by leading authorities. The General Contact Insecticide that Kills Rose Bugs and other insects. Used with any good spray-pump, diluted with from 20 to 25 parts of water. Pleasant and harmless to use. Guaranteed effective when used according to directions on can. Gal. \$6, 1/2 gal. \$3.25, qt. \$1.75, pt. \$1. Trial Size, or sufficient to make one gallon when diluted, and care for several plants for the season, 50 cts., postpaid 60 cts.



Insecticides containing poisons cannot be sent through the mails. Except where the postpaid prices are given, they must be sent by express or freight.



Hammond's Slug-Shot

The old reliable remedy for currant worms, cabbage worms, caterpillars and other insects that destroy vines and plants.

A light, composite, fine powder, distributed either by duster, bellows, or in water by spraying. Reliable in killing currant worms, potato bugs, cabbage worms, chicken lice, slugs, sow bugs, etc., and it is also strongly impregnated with fungicides.

1-lb. pkg.\$0 20 | 25 lbs. in 5-lb. packages..\$2 50
 5-lb. pkg. 55



Bug Death

Prevents Blight and Kills Bugs
 Free from Paris Green or Arsenic

The favorite among truckers and gardeners for over twenty years for chewing insects on potatoes, tomatoes, squashes, cucumbers, cabbages, melons. No danger of arsenical injury to plants, bees, birds, or humans. Bug Death is a fine powder which may be applied dry or in water.

Postpaid
 1-lb..\$0 20 \$0 30 | 12 1/2-lb..\$1 40 \$1 65
 3-lb.. 40 55 | 100-lb... 8 75
 5-lb.. 60 80

Bug Death Alpha

A new companion preparation to regular Bug Death, especially for sucking insects, Lice and Aphis, and particularly for use on Fruit Trees, Berry Bushes, Grape-Vines, House Plants. Likewise a fine, tenacious powder, applied dry or in water. Ready for use in dust form just as it comes in the package. No Paris Green or Arsenic.

Postpaid
 12-oz...\$0 20 \$0 30 | 80-lb. keg...\$8 75
 10-lb... 1 40 1 60 | 150 lbs....16 00

Arrest Disease and Kill Bugs with the Garden Police

NIAGARA HAND DUST-GUN AND "SIX LITTLE DUSTS"

READ THIS TABLE AND SELECT PROPER DUST TO BUY

PEST TO CONTROL	DUST TO USE	
	Flowers and Shrubs	Vegetables
Insects and worms which actually eat portions of the plant: beetles, worms, caterpillars, etc. External Chewing Insects.	No. 1 Entodust	No. 1 Entodust
Insects which suck out the plant juice: aphid (plant-lice), plant-flies. For fumigating greenhouses and conservatories. Sucking Insects.	No. 2 A-1 Dust	No. 2 A-1 Dust
Diseases: Many mildews, blights, fungus troubles.	No. 4 Pomodust	No. 3 D-6 Dust
Diseases: Many mildews, blights, fungus troubles, and to kill worms, caterpillars, beetles, chewing insects (a combination dust).	No. 4 Pomodust	No. 5 D-20 Dust
A good dust to use to keep up general good health, prevent disease and attacks of Insect Pests.	No. 6 All-in-One Dust	No. 6 All-in-One Dust



PRICES

	Each
Niagara Hand Dust-Gun.....	\$1 25
No. 1 Entodust, 1-lb. pkg.....	40
No. 2 A-1 Dust, 1-lb. pkg.....	60
No. 3 D-6 Dust, 1-lb. pkg.....	45
No. 4 Pomodust, 1-lb. pkg.....	35
No. 5 D-20 Dust, 1-lb. pkg.....	50
No. 6 All-in-One Dust, 1-lb. pkg...	60



Niagara Soluble Sulphur Compound is a dry powder produced from sulphur and soda ash by a patented process. It is an improvement over liquid lime-sulphur. It is not a dry lime-sulphur, but a much superior product with greater insecticidal and fungicidal values in less bulk. It is shipped dry—you add the water. It is particularly effective against San José scale, the worst enemy of American fruit. Equally effective against all other scale insects, such as peach-leaf curl and many other pests.

Amounts to Use. Use 12½ pounds of Niagara Soluble Sulphur Compound in 50 gallons of water (less amounts in proportion) for scale on apples, pears, etc. Use 8 to 10 pounds in 50 gallons of water on peaches, except in cases of extremely heavy scale infestation, when 12½ pounds may be desirable. If scale is not a real factor, use only 6 pounds in 50 gallons of water on peaches, to combat leaf-curl. On early peach varieties use 8 pounds to 50 gallons of water.

Lb. can 35 cts., postpaid 45 cts.; 5-lb. can \$1, postpaid \$1.15; 10-lb. can \$1.75, postpaid \$1.95; 25-lb. drum \$3.50, postpaid \$3.90; 50-lb. drum \$5.75; 100-lb. drum \$10.



Stanley's Crow Repellent Protects Your Corn

During the period when it is most easily damaged, by ridding your crop, of crows and other corn-pulling birds, and animal pests, such as moles, gophers, woodchucks, squirrels, etc.

It saves loss of seed and labor of replanting. It positively will not clog any planter. It aids and hastens germination of seed corn. It protects seed from rotting in the ground. It insures larger yield per acre. It is non-poisonous and will not injure the seed of any kind of corn. It will not kill birds or animals, but will keep them away and prevent destruction by them.

It is more effective, more convenient to use, and more economical, measured by results, than any other material.

It has been used successfully by experienced corn-growers for over fifteen years.

Large can, enough for 2 bushels of seed corn, \$1.50, postpaid \$1.65; small can, enough for 1 bushel of seed corn, \$1, postpaid \$1.10.



It is a known fact that the damage from the root maggot every year is enormous, and in some instances it has been known to have completely wiped out a crop.

Mag-o-tite is not a new product, but has been in use for a number of years and has been found by many users, both in the West and East, to be helpful in the control of root maggot on cabbage, cauliflower, kale, Brussels sprouts, broccoli, onions, radishes, turnips and rutabaga, and while primarily intended for controlling root maggot, it has also been found to be of value in controlling strawberry crown borers, cabbage worms, asparagus miners, flea beetles, and certain kinds of slugs.

SUGGESTED DIRECTIONS FOR USE:

Sprinkle Mag-o-tite freely in and over the drill- or seed-bed when seeding. After the plants have commenced to grow, Mag-o-tite is often sprinkled around and near them. In setting out cabbage and cauliflower plants, Mag-o-tite may be used freely alongside the plant and on the surface of the ground. In growing plants, where wilt has commenced, caused by the root maggot, it might be well to remove portion of dirt around the plant and sprinkle Mag-o-tite freely around the stems and root. Mag-o-tite can be used freely near the plants without injury and may be dusted on them.

1-lb. tin.....	\$0 50
5-lb. tin.....	1 50
25-lb. steel container, with handles.....	5 00
50-lb. steel container, with handles.....	9 00

Bourbon Remedy Company's Garden Insecticide

is based on a formula recommended by several state experiment stations for use against the Mexican bean beetle, and is especially adapted for the control of this pest. It is also effective against potato bugs (beetles), cabbage worms, and most of the leaf-eating insects that ordinarily attack garden vegetables, vines, and bushes, and white blight or mildew on rose bushes.

12-oz. sifter-top can.....	\$0 35
3-lb. can.....	1 00





Tree Tanglefoot

A sticky material for banding trunks of trees, vineyards, etc., to protect them against the ravages of climbing insect pests.

One application lasts three to four months, outlasting ten to twenty times any other tree-banding compound.

No mixing is required. It comes ready for use and is easily and quickly applied with a wooden paddle. One pound makes 15 to 20 lineal feet of band.

It will not soften, run, or melt, yet is always elastic, expanding with growth of trees.

Lb. 60 cts., postpaid 70 cts.; 5 lbs. \$2.75, postpaid \$2.90; 10 lbs. \$5.25, postpaid \$5.50; 25 lbs. \$11, postpaid \$11.40.

Key Brand Para-dichlorobenzene



For peach tree borers. When placed around the base of a peach tree, will generate a gas that will kill the borers in that tree. Use about 1 ounce per tree. Full directions on container. 1-lb. pkg. 80c., 5-lb. pkg. \$3.50.

Key Brand Cut-worm Killer

For use as poisonous bait against cutworms and slugs by placing around plants subject to attack. It has an enticing odor that worms prefer to vegetation. One pound is sufficient for 100 plants in hills or 75 in rows. 1-lb. box 50c., 5-lb. box \$2, 25-lb. pkg. \$7.50.



Key Brand Tree Wound Paint

Prevents decay after pruning. This residual, penetrating, antiseptic paint is not affected by heat, cold, or moisture. 1-qt. can \$1.20, postpaid \$1.35; 1-gal. can \$3, postpaid \$3.30; 5-gal. can \$13.50.



Key Brand Non-Poisonous Weed Killer

Requires less water. Kills more weeds than poisonous weed killer, without endangering human, animal or bird life. One gallon sufficient to treat 500 square feet. Dilute one part Key Brand Non-Poisonous Weed Killer to 20 parts of water, and apply with sprinkling cart or can. 1-qt. can 75 cts., postpaid 90c.; 1-gal. can \$2, postpaid \$2.30; 5-gal. can \$8.

Hammond's Weed Killer

Hammond's Weed Killer has been in use for many years, and has held a useful place in all tidy towns to prevent the growth of weeds along gutters, paths or tennis-courts. Will, naturally, kill any kind of grass without distinction, so it must be used cautiously where grass is desired. Dilute 1 gallon to 30 or 40 gallons of water. Qt. 65 cts., gal. \$1.50, 5 gals. \$6.50, 10 gals. \$12.



— for orchard and garden sprays

Kayso is the combined casein spreader and adhesive, recommended by experts in horticulture and used by progressive fruit- and vegetable-growers and florists throughout the United States.

Because of increased spreading and wetting properties, a tank of spray containing Kayso will cover more trees than ordinary spray. Kayso reduces waste of spray by preventing it from collecting in drops and rolling off the smooth surfaces of fruit, leaves, and bark. Kayso enables the efficient sprayman very materially to reduce the cost of spraying.

Kayso keeps the spray from washing off.

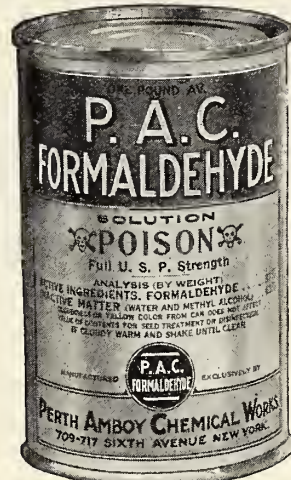
PRICES

8 oz. carton 30c.; postpaid, 40c.; 2 lbs. 50 cts., postpaid, 60 cts.; 10 lbs. \$2.25, postpaid, \$2.45; 100 lbs. \$18.

Ask for Special Circular

Lemon Oil

For mealy bug, brown and white scale on palms and rubber plants, thrip, red spider, caterpillar, black and green fly, fleas and skin diseases on dogs and other animals, and insects in poultry houses. ½pt. 35 cts., pt. 60 cts., qt. \$1, gal. \$3.



Formaldehyde

For wheat and barley smut, use one pint of Formaldehyde in 40 gallons of water. Sprinkle or dip seed in tubs; cover several hours; sow damp. For oat smut, spray oats with one pint Formaldehyde in 10 pints of water. Sack or sow.

FOR POTATO SCAB AND RHIZOCTONIA

Soak potatoes two minutes in warm solution (118° to 122° Fahr.) of 1 pint Formaldehyde in 15 gallons water. Small lots on the stove in washboiler; larger lots in tank heated with tank heater or by steam from tractor or other boiler.

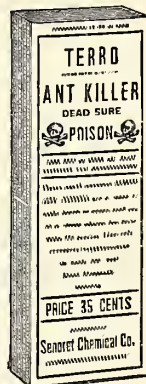
Treat soil with Formaldehyde to overcome root rot of most vegetables (U. S. Bulletin No. 217). Will prevent onion smut, lettuce rosette and rot, tobacco bed-rot, and damping-off fungi.

Lb. can 40 cts., 10 1-lb. cans \$3.50, 50 1-lb. cans \$15, 60-lb. keg \$16.

Ask for booklet and full directions.

Terro Ant Killer

Will rid a place of ants in 24 hours. From pantries, refrigerators, plants, flowers or any other place infested with ants. Terro is guaranteed to do the work or money back. Bottle 50 cts. (postpaid 60 cts.).



Key Brand Grafting Wax

For all pruning and grafting purposes. Very convenient when trimming trees and shrubbery, affording necessary protection. Comes in sticks and is quickly and easily handled. This item is one of such general use it should always be carried in ample quantities to meet every contingency. During winters when there is lots of snow, rabbits, mice, etc., often damage twigs and branches by nibbling at all they can reach then Grafting Wax is required in larger quantities. 1-lb. pkg. 50 cts., postpaid 60 cts., ½-lb. pkg. 35 cts., postpaid 40 cts.

WIARD PLOWS

The Wiard Plows have been continuously manufactured since 1804. Their history has been a record of constant improvement in efficiency, strength and durability, and they are today recognized as leaders in this class of Agricultural Implements.

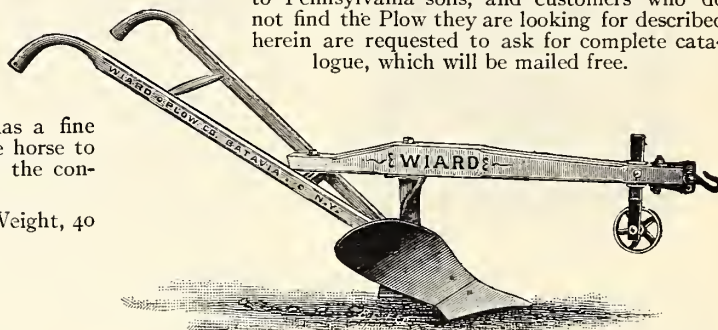
The real quality of an implement is shown, not by what its makers claim for it, but by the results which it gives in the hands of the average user. Therefore, go to the farmer, whom you consider fair and without prejudice, and see what he says about Wiard Implements; in other words, "Ask the man who owns one." Space will permit of our showing but a few of the leading styles adapted to Pennsylvania soils, and customers who do not find the Plow they are looking for described herein are requested to ask for complete catalogue, which will be mailed free.

WIARD ONE-HORSE PLOWS

No. 62. Right-Hand, Chilled Moldboard

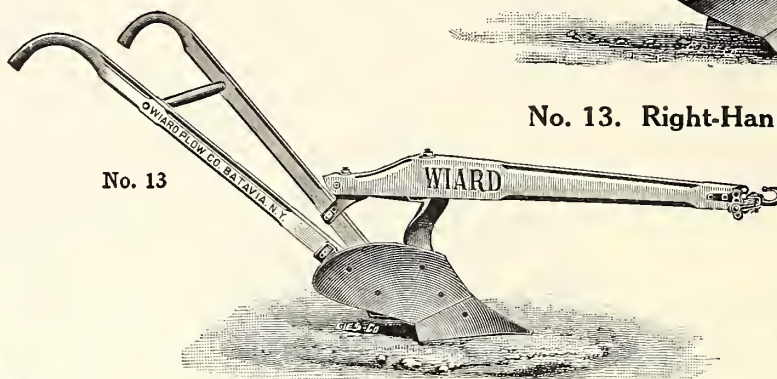
This is the smallest Wood Beam Wiard Plow. It has a fine turning moldboard and an adjustable beam, allowing the horse to walk in the furrow or on the land; is light, strong, and the construction is perfect.

Capacity, 3 to 5 inches deep, 6 to 8 inches wide. Weight, 40 pounds. Plain, \$8; wheel, \$1.50 extra.



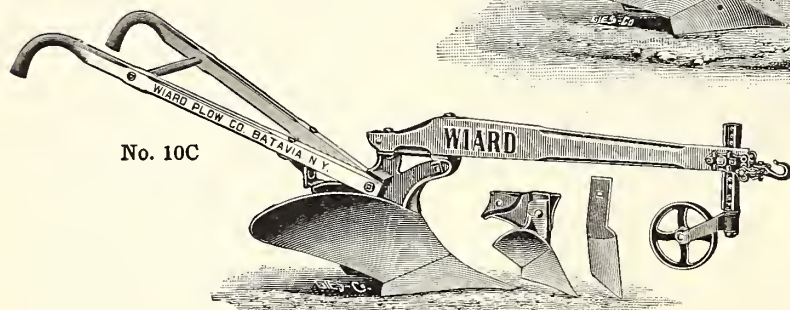
No. 13. Right-Hand, Chilled Moldboard

No. 13



A medium-sized one-horse plow adapted to all soils. Has adjustable Beam. Handles can be raised or lowered.

Capacity, 4 to 6 in. deep, 6 to 9 inches wide. Weight, 52 pounds. Plain, \$10.50; wheel \$1.75 extra.



No. 10C

No. 10C. Right-Hand, Chilled Moldboard

This is the acme of perfection in one-horse Plows. Adjustable beam so that the horse can walk in the furrow or on the land

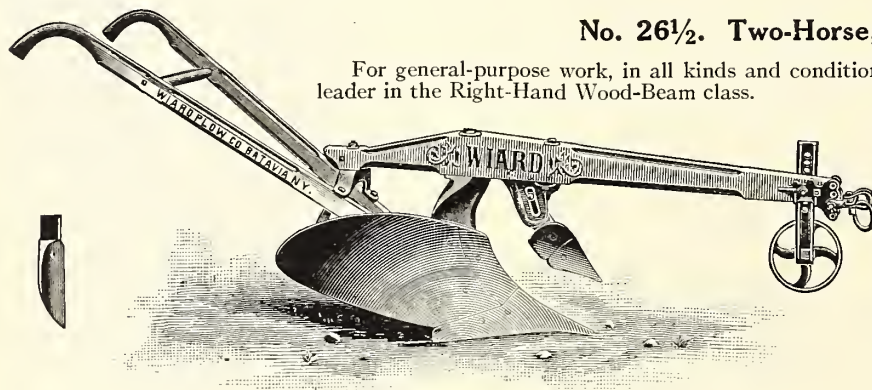
Capacity, 4 to 7 inches deep, 6 to 11 inches wide. Weight, 77 pounds. Plain, \$12.75; wheel, \$1.75 extra; jointer, \$3.25 extra.

WIARD TWO-HORSE PLOWS

The Plows shown on this and the following pages are constructed with special reference to obtaining the greatest strength with least weight. They have been thoroughly tested by hundreds of farmers in all kinds and conditions of soil and are unexcelled for general-purpose work.

No. 26½. Two-Horse, Right-Hand

For general-purpose work, in all kinds and conditions of soils, this plow cannot be excelled. A leader in the Right-Hand Wood-Beam class.



Capacity, 5 to 8 inches deep, 10 to 14 inches wide, weight, 115 pounds. Plain, \$20, wheel, \$1.75 extra; jointer, \$4.50 extra; steel moldboard, \$2 extra.

A full line of extras for Wiard, Oliver, Gaie, and South Bend Plows always in stock. Accept none but the "Genuine."

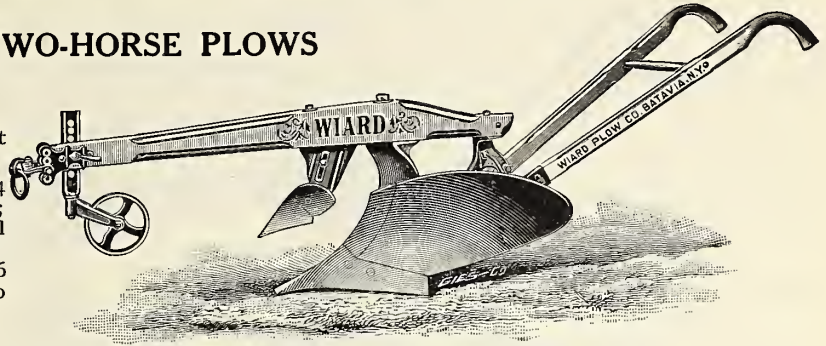
WIARD TWO-HORSE PLOWS

Two-Horse, Left-Hand

One of the old reliables and a leader yet. Light draft. Greatest strength with least weight.

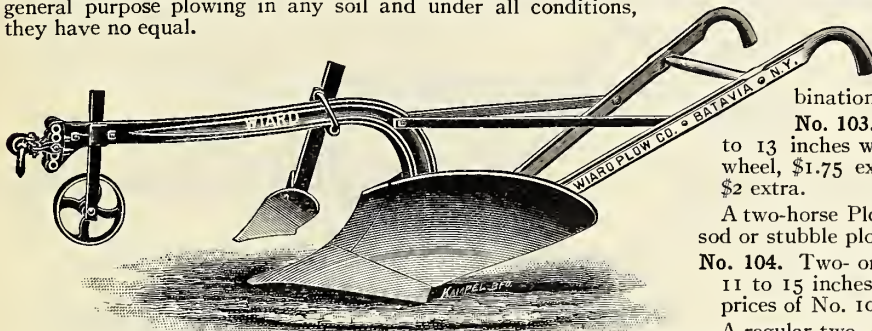
No. 27. Capacity, 6 to 8 inches deep, 10 to 14 inches wide, weight, 105 pounds. Plain, \$20; wheel, \$1.75 extra; jointer, \$4.50 extra; steel moldboard, \$2 extra.

No. 28. Capacity 7 to 9 inches deep, 12 to 16 inches wide, weight 112 pounds. Add \$1 to prices of No. 27.



WIARD PATENT STEEL-BEAM PLOWS

This series of Plows is the "acme of perfection" in Plow construction. They are made to wear and from the best material obtainable are balanced so as to handle very easily, run steadily; are light in draft and have a large capacity and superior turning qualities. For general purpose plowing in any soil and under all conditions, they have no equal.



Nos. 103 and 104 Left-Hand

The latest "New Pattern" series of combination, grooved steel-beam, general purpose Plows.

No. 103. Two-horse. Capacity, 4 to 7 inches deep, 9 to 13 inches wide. Weight, 120 pounds. Plain, \$17.75; wheel, \$1.75 extra; jointer, \$4.50 extra; steel moldboard, \$2 extra.

A two-horse Plow of medium capacity, and suited to either sod or stubble plowing.

No. 104. Two- or three-horse. Capacity, 5 to 8 inches deep, 11 to 15 inches wide. Weight, 130 pounds. Add \$1.75 to prices of No. 103.

A regular two- or three-horse Plow, suited to all soils.

No. 43. Right-Hand. Same capacity, size and price as No. 103 Left-Hand.

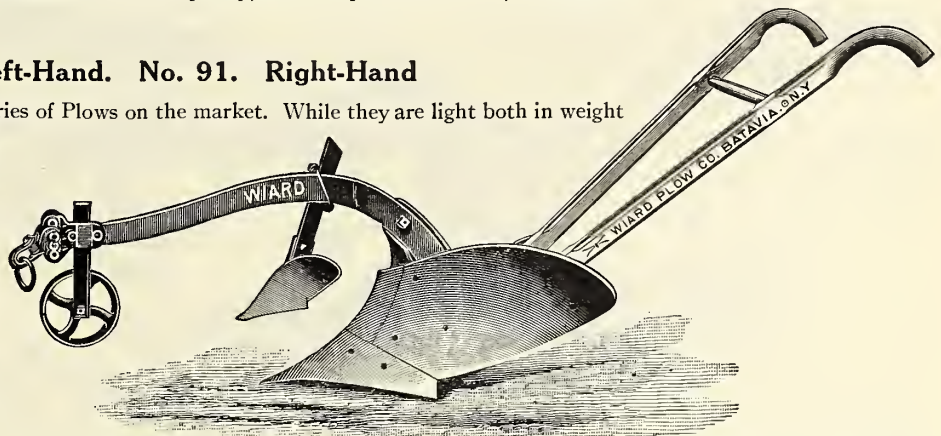
No. 44. Right-Hand. Same capacity, size and price as No. 104 Left-Hand.

No. 81. Left-Hand. No. 91. Right-Hand

This is one of the most popular series of Plows on the market. While they are light both in weight and draft, they are very strong. The moldboards have superior turning qualities, and they are adapted to all conditions of soil. They are so balanced that they handle easily. They have great strength and wearing qualities and far outlast many other Plows which are sold at a higher price, which explains the great popularity they have attained.

They are especially adapted to the hard and uneven soils of the states of Pennsylvania, Maryland, Ohio, and other sections where left-hand Plows are used.

Capacity, 5 to 8 inches deep, 10 to 14 inches wide. Weight, 128 pounds. Plain, \$19; wheel, \$1.75 extra; jointer, \$4.50 extra; steel moldboard, \$2 extra.



PLOW REPAIRS

In considering the purchase of a Plow, one of the important questions always is

"Where can I get repairs?"

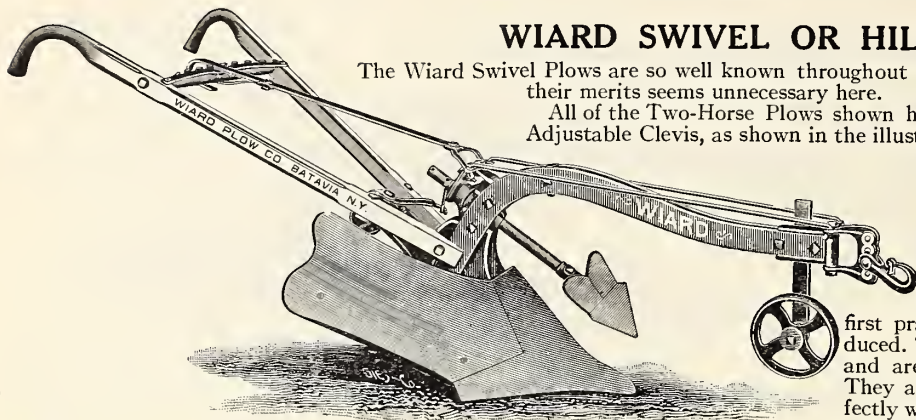
We carry in stock a full line of extras for all the plows we sell, and our customers do not lose valuable time waiting for repair parts coming from distant factories.

Both dealers and users should beware of imitations, especially of spurious points, jointer points, and landsides. Such repairs are generally made of poor material, they seldom fit, and often render the implement useless.

WIARD SWIVEL OR HILLSIDE PLOWS

The Wiard Swivel Plows are so well known throughout Pennsylvania that a detailed account of their merits seems unnecessary here.

All of the Two-Horse Plows shown here are furnished with either Common or Adjustable Clevis, as shown in the illustration.



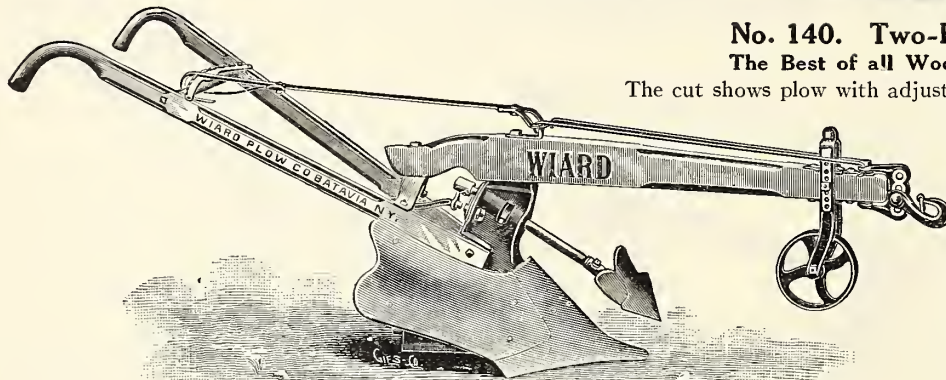
No. 120. Capacity, 5 to 8 inches deep, 10 to 13 inches wide. Weight 118 pounds. Plain, \$22.50; adjustable clevis, \$1.50 extra; wheel, \$1.75 extra; jointer, \$4.50 extra; colter, \$4 extra; steel moldboard \$2 extra.

WIARD WOOD BEAM SWIVEL PLOWS

No. 21. One-Horse Hillside Plow, Chilled Moldboard

By an ingenious but simple clevis attached to these Plows they can be used with horse walking in the furrow, a great convenience for garden and vineyard work.

Capacity, 4 to 7 inches deep, 6 to 10 inches wide. Weight 77 pounds. Plain, \$13.50; wheel, \$1.50 extra; steel moldboard, \$1.25 extra.



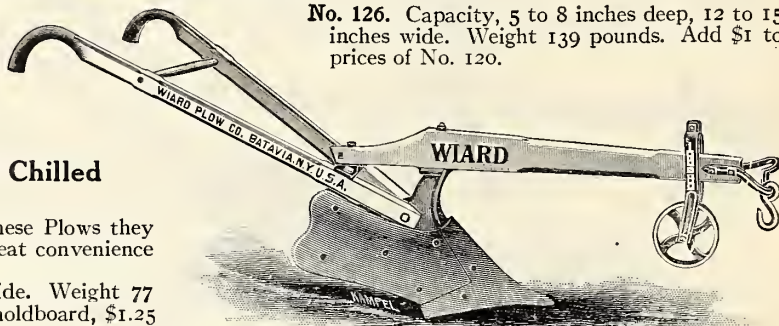
This plow has about the same capacity as the No. 140, the wearing parts being the same except the shoe. The outlines are somewhat different, as shown by the cut, and the Plow is lighter. It can be fitted with either cast-iron or soft center-steel moldboard, adjustable clevis and adjustable automatic colter. This Plow has been on the market for many years and has stood the test of time. The cut shows Plow with common clevis. Capacity, 5 to 8 inches deep, 10 to 13 inches wide. Weight 104 pounds. Plain, \$18; adjustable clevis \$1.50 extra; wheel, \$1.75 extra; steel moldboard, \$2 extra.

Wiard Plows have been manufactured continuously since 1804

WIARD STEEL-BEAM SWIVEL PLOWS

The Wiard Plow Co. has always had the reputation for making the best Hillside plow on the market. These are the first practical Steel-beam Swivel Plows ever produced. The beams are of highest grade forged steel, and are stronger than any other beam made. They are so adjusted that the Plow works perfectly when reversed either way, and all the parts are attached in the simplest but strongest manner.

No. 126. Capacity, 5 to 8 inches deep, 12 to 15 inches wide. Weight 139 pounds. Add \$1 to prices of No. 120.

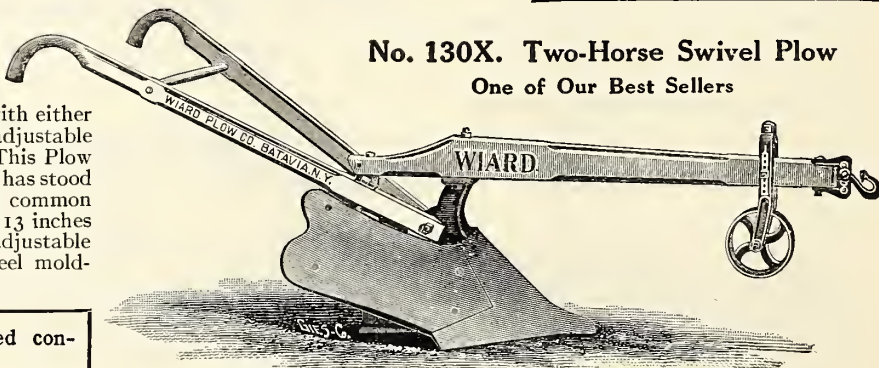


No. 140. Two-Horse Swivel Plow The Best of all Wood-Beam Swivel Plows

The cut shows plow with adjustable clevis and jointer. This is the most superb of all Wood-Beam Swivel Plows. It has a strong, high standard and long shoe, making it one of the most steady running Plows in our list. Capacity, 5 to 8 inches deep, 10 to 13 inches wide. Weight 115 pounds. Plain \$19, adjustable clevis, \$1.50 extra; wheel, \$1.75 extra; jointer, \$4.50 extra; colter, \$3.75 extra; steel moldboard, \$2 extra.

The Wiard leads
in Swivel Plows

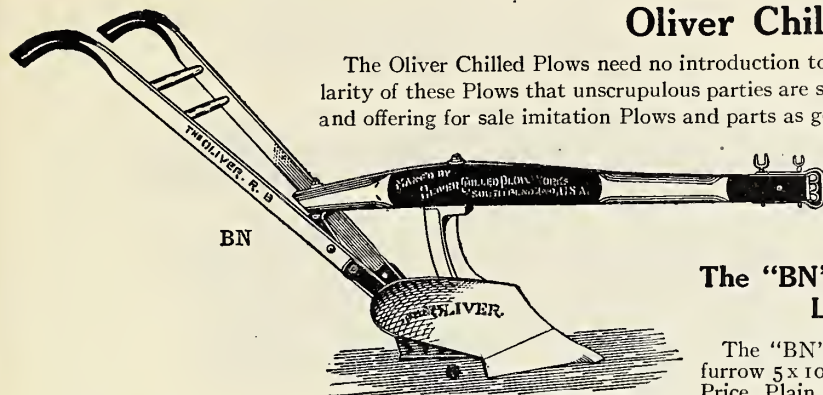
No. 130X. Two-Horse Swivel Plow One of Our Best Sellers



Oliver Chilled Plows

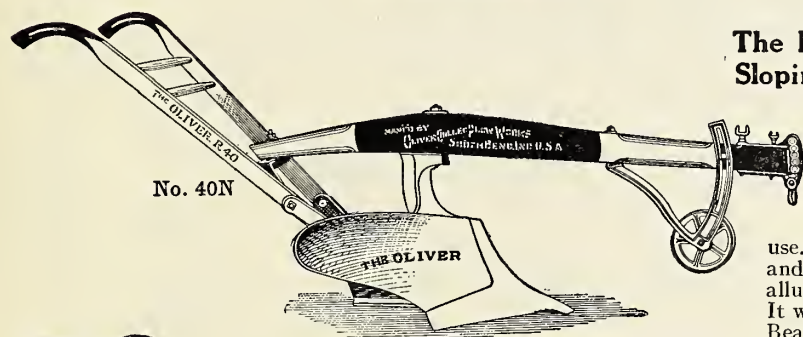
The Oliver Chilled Plows need no introduction to the Pennsylvania farmer. So great is the popularity of these Plows that unscrupulous parties are seeking to trade upon their good name by making and offering for sale imitation Plows and parts as genuine.

We have space to show but a few of the leading favorites among Pennsylvania farmers, but will send a complete catalogue on request. A full line of genuine Oliver repairs always in stock.



The "BN" Wood-Beam, Full Chilled, Sloping Landside. Right-Hand Only

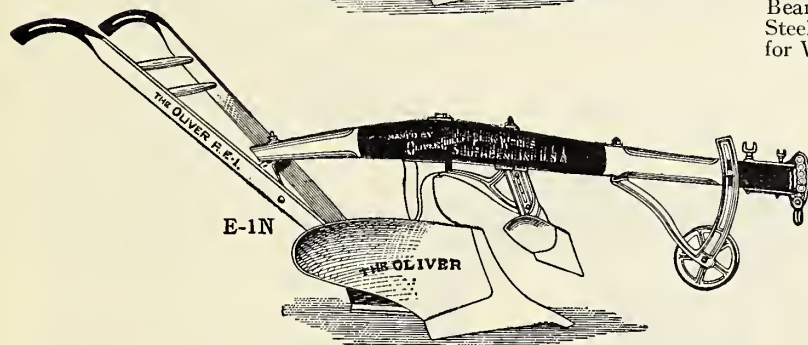
The "BN" Plow is a light one-horse Plow. It will turn a furrow 5 x 10 inches, and is a prime favorite. Weight, 65 lbs. Price, Plain, \$10.75; Wheel, extra \$1.50; Jointer, extra \$3.25.



The No. 40N Wood-Beam, Full Chilled, Sloping Landside, Right and Left-Hand

This is the veteran Plow of the Oliver line and for many years it has been familiar to a majority of the farmers in America.

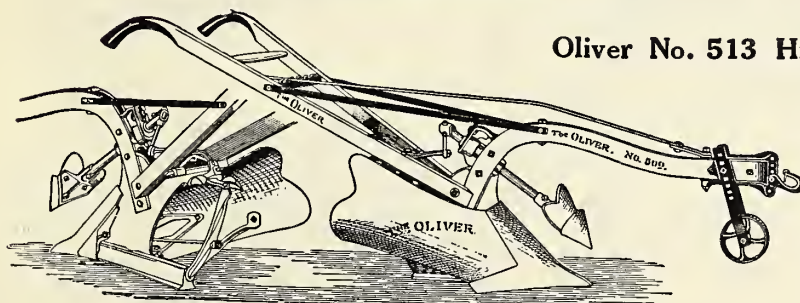
The No. 40N is a two or three-horse Plow, first-class in all respects and immensely popular, its sales exceeding those of any other Plow in use. Always reliable, its great capacity, steady running and turning qualities, make it valuable in sandy or alluvial lands, and on farms containing a variety of soils. It will turn a furrow 9 x 16 inches. Weight of Wood-Beam 125 lbs., Steel-Beam 153 lbs. Price, Wood or Steel-Beam, Plain, \$21.50. Wheel, extra \$2.25; Jointer for Wood-Beam, extra \$3.50; for Steel-Beam, \$4.50.



The E-1N Wood-Beam Only, Full Chilled, Sloping Landside, Right and Left-Hand

The E-1N Plow is a very popular heavy two-horse or light three-horse Plow, and intended for general-purpose work. Capacity, 7 x 14 inches. Weight, 118 lbs. Price, Plain \$21.50; Wheel, extra \$2.25; Jointer, extra \$3.50.

Oliver No. 513 Hillside, Steel-Beam Plow

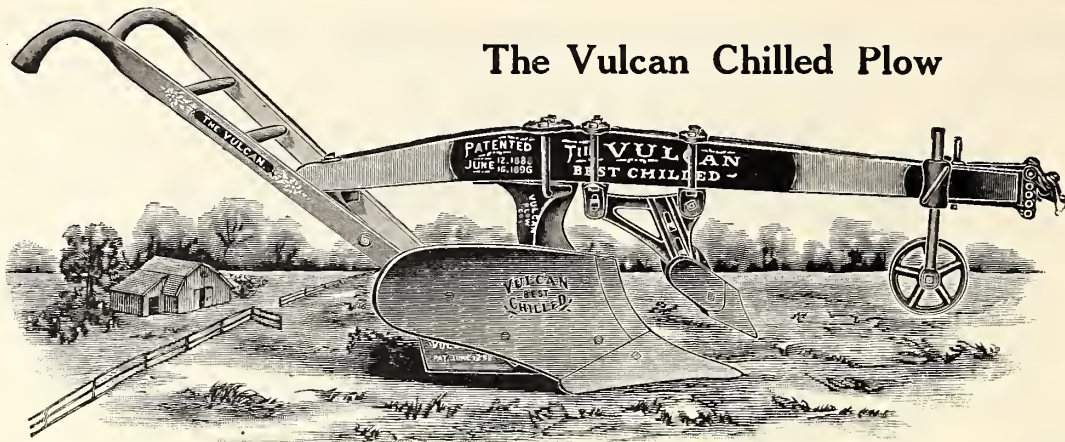


The illustration shows a new and very neat pattern of Hillside Plow, which possesses so many valuable features as to make it a leader of its class. Light in weight, light in draft and the shape and turning qualities are A-1. Bottoms are long, insuring steadiness and ease of handling. Capacity, 8 x 15 inches. Weight 144 lbs. Price, Plain, \$25.25; Wheel, extra \$1.50; Jointer, extra \$3.

Prices of other Oliver Chilled Plows

No.	Beam	Hand	Plain	Wheel	Jointer	No.	Beam	Hand	Plain	Wheel	Jointer
10N	Wood	Right	1-Horse	\$14 50	\$1 50	51	Wood	Hillside	1-Horse	\$12 50	\$1 50
13N	Wood	Right	1-Horse	16 25	1 50	53 1/2	Wood	Hillside	2-Horse	19 75	1 75
20N	Wood	R or L	2-Horse	19 00	2 25	153	Steel	Hillside	1-Horse	12 50	
83	Steel	Left	2-Horse	19 50	2 00	512	Steel	Hillside	2-Horse	22 50	1 50
84	Steel	R or L	2-Horse	22 00	2 00						3 00

SPECIAL CIRCULARS OF ANY OF ABOVE PLOWS MAILED ON REQUEST



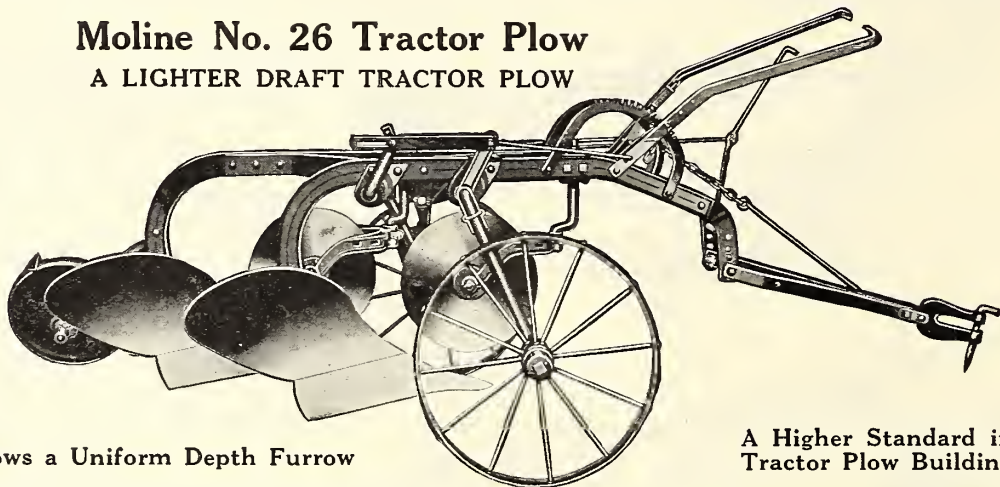
The Vulcan Chilled Plow

The Vulcan Chilled Plow has been manufactured for more than a half century and is considered by many users as the best Chilled Plow manufactured. Superior construction of the best material by competent mechanics is responsible for its strength, light draft and steady running. They are equipped with ribbed moldboards, which act as strengthening braces, and corrugated points, which it is claimed will outwear ordinary points and also hold a cutting edge a greater length of time.

	Beam	Hand	Capacity	Weight	Plain	Wheel	Jointers
No. 8	Wood	Right	5 x 8 in.	77 lbs.	\$11 25	\$1 75	
No. 13	Wood	Left	8 x 13 in.	145 lbs.	19 75	1 75	\$4 50
No. 14	Wood	Right or Left	8 x 14 in.	155 lbs.	21 75	1 75	4 50
No. 13	Steel	Right or Left	8 x 13 in.	127 lbs.	19 75	1 75	5 50
No. 14	Steel	Right or Left	8 x 14 in.	135 lbs.	21 75	1 75	5 50
No. 8	Wood	Hillside	5 x 8 in.	69 lbs.	13 00		
No. 10	Wood	Hillside	7 x 10 in.	108 lbs.	17 00		
No. 8	Steel	Hillside	5 x 8 in.	73 lbs.	13 00	1 75	
No. 10	Steel	Hillside	7 x 10 in.	112 lbs.	17 00	1 75	
No. 12	Steel	Hillside	8 x 12 in.	143 lbs.	23 50	1 75	5 50

Moline No. 26 Tractor Plow

A LIGHTER DRAFT TRACTOR PLOW



Plows a Uniform Depth Furrow

A Higher Standard in
Tractor Plow Building

The long flexible draw which allows the Plow to work at a uniform depth, regardless of the uneven condition of the ground, together with a rear furrow wheel that entirely relieves all land-side pressure, is responsible for the universal comment of owners—"The lightest draft Tractor Plow I have ever used."

It is so simple and easy to operate that farmers do as good work with it as the most experienced factory expert.

The heavy braces and the heat-treated beams are riveted together. It is built like a railroad bridge.

The power lift is simple, powerful, and positive. Raising and lowering the Plow is controlled by a trip lever from the seat of the Tractor. Plow always lifts 6 inches above the ground for turning and transporting.

In starting a furrow, the Plow penetrates the ground quickly,

like a walking Plow. The friction safety release is dependable, protecting the Plow from breakage or bending of parts in stony land or in stumps.

Built in 12 and 14-inch chilled bottoms or with Moline Acme soft-center hardened steel moldboards and shares which give longer service, scour better, and are lighter draft.

PRICES

With chilled bottoms, 15-inch rolling coulters, and rear wheel

12-inch, 2 furrow.....	\$90 00
14-inch, 2 furrow.....	90 00
For steel bottoms instead of chilled, add	1 50
Jointers for coulters, extra per pair.....	3 50

Ask for special folder giving full description

The Wiard Reversible or Two-Way Sulky Plow

This Sulky is adapted to all soils, leaves no ridges or dead furrows and does perfect work on either level land or side hill.

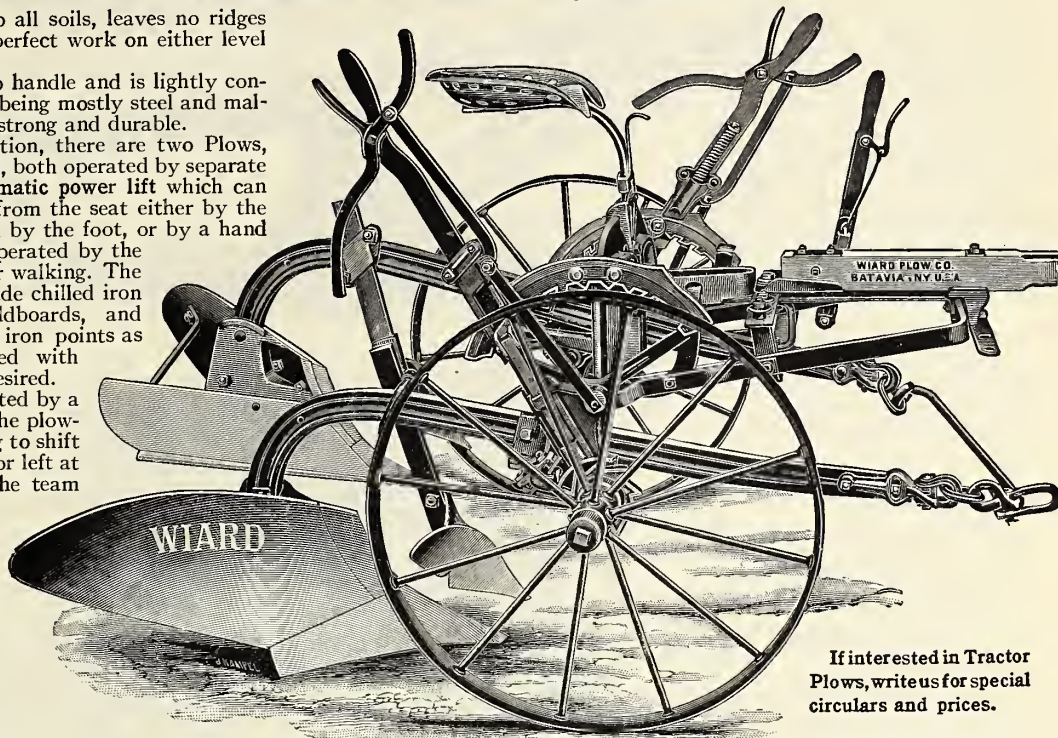
It is very simple, easy to handle and is lightly constructed, the material used being mostly steel and malleable iron, making it very strong and durable.

As shown in the illustration, there are two Plows, one right- and one left-hand, both operated by separate levers and having an automatic power lift which can be operated by the driver from the seat either by the use of a trip lever operated by the foot, or by a hand trip lever which can be operated by the driver either when riding or walking. The Plows have the highest grade chilled iron or soft-center steel moldboards, and either forged steel or cast iron points as ordered, and can be fitted with jointer or plain colter, as desired.

The Pole Shifter is operated by a hand lever, which enables the plowman while riding or walking to shift the pole either to the right or left at any angle desired, to suit the team and get the proper width of furrow, either on flat land or side hill, without side draft.

The Automatic (Power Lift) Foot Trip operated as follows: The Plow is lifted from the furrow by the team while in motion, by pressure of the foot on the trip lever, until the Plow begins to lift and the lever moves forward, which will then release and lock itself in place. The lift can also be operated by hand by the driver, either from the seat when riding or when walking behind. It unlocks by pressure of the foot on the foot trip or by hand by pressure of the upper rear handle of dog, lowering the Plow.

The Sulky is perfectly balanced so that whether the operator is on the seat or following the Plow there is absolutely no weight on the horses' necks. The seat can be adjusted so as to allow it to be leveled when plowing on side hill, throwing the weight of the operator towards the upper wheel, giving comfort and ease to the driver.



If interested in Tractor Plows, write us for special circulars and prices.

The Double Sulky can be fitted with the following bottoms: Nos. 43 right and 103 left. Cuts 4 to 7 in. deep, 9 to 13 in. wide. With chilled or steel molds. Nos. 44 right and 104 left. Cuts 5 to 8 in. deep, 11 to 15 in. wide. With chilled or steel molds.

No. 400. Two- or three-horse. Weight 550 lbs. Complete with chilled moldboards, jointers, or plain colters, cast-iron points, two and three-horse hitch, \$95; fitted with steel moldboards, \$4 extra; fitted with forged steel points, \$8 extra. Ask for Special Circular.

The Oliver No. 23 Reversible Sulky Plow

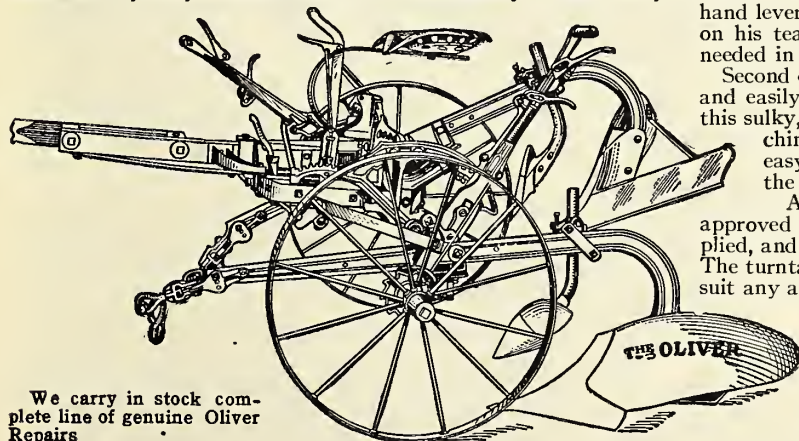
The No. 23 Sulky Plow is fitted with No. 84 bottom s, right and left, capacity about 8 by 16 inches, chilled or steel moldboards. In sections where this Plow has been used, it has become very popular, which has been proved by the sales which have grown by leaps and bounds.

By means of the "horse-lift" which is brought into play by simply pressing forward slightly on the foot-trip, the operator's work is diminished by fully one-half and it is not necessary to lean away back in an uncomfortable and often unsafe position to use the hand lever. With this Plow the operator can keep his eyes on his team and his hands on the reins, the feet only are needed in order to raise the Plow.

Second only to this important improvement is the simple and easily operated tilting device connected with the seat of this sulky, which when plowing along hillside while the machine is, of course, leaning down hill, makes it very easy for the operator to keep a level seat and maintain the equilibrium of the Plow.

Additional distinct points of advantage are the most approved and convenient guiding lever most effectively applied, and the greater range of pole-shift for hillside plowing. The turntable on beam makes it possible to land the plow to suit any and all conditions—changing the Plow for use with two or three horses is a simple and easy matter—a draft device is provided that is sure to work satisfactorily—and the hitch never fails to operate correctly.

Complete with chilled moldboards, chilled shares, jointers or rolling colters, either two or three-horse hitch, \$105; with steel moldboards, \$6 extra.

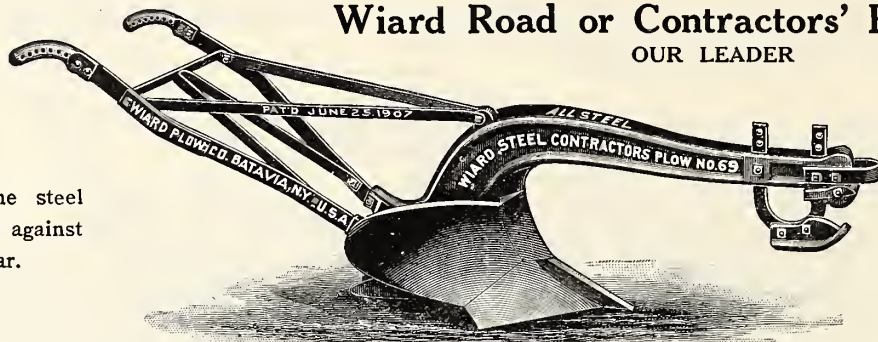


We carry in stock complete line of genuine Oliver Repairs

Wiard Road or Contractors' Plow No. 69

OUR LEADER

We guarantee the steel beam on this Plow against breakage for one year.



Price with forged steel point \$62

This Plow is intended for use with either animal power, a traction engine, or road-roller. Weight, with clevis, 315 pounds. For all road or contractors' work—for tearing up cobblestones and macadam—it can be used as a perfect rooter and pavement Plow by simply removing the steel wing below the moldboard—thus making a two-in-one Plow for all-round work. Ordinarily, the contractor has one Plow for general purpose or furrow work and another Plow for rooter work or tearing up old pavements. This No. 69 does the work of both and answers any and all purposes, means a less investment and keeping in stock extra parts for one Plow only.

Wiard Road or Contractors' Plows Nos. 64, 65, 66 and 67

No. 64, with steel beam, is a light Plow intended for road-repair work. It has excellent turning qualities and will hang to the ground on a hard and difficult job. Weight, 160 pounds. Price, with forged steel point, \$38.

No. 65, with cast-iron beam, is a medium-weight Plow intended for general contracting work. Weight, 200 pounds. Price, with cast-iron point, \$29.75; with forged steel point, \$34.75.

No. 66, with cast-iron beam, is built with extra-heavy construction and reinforcements throughout, and is intended for heavy work where weight is desired and the utmost strength is necessary. Weight, 250 pounds. Price, with cast-iron point, \$34.25; with forged steel point, \$39.

For severe service the steel point should be used, as it can be welded and drawn by a blacksmith.

No. 67. Rooter—Four- or Six-Horse. With cast-iron beam. This Plow has great strength and is adapted to contractors' work and for tearing up cobble-stone or macadam pavements. Weight, 250 pounds. Price, with forged steel point, \$39.

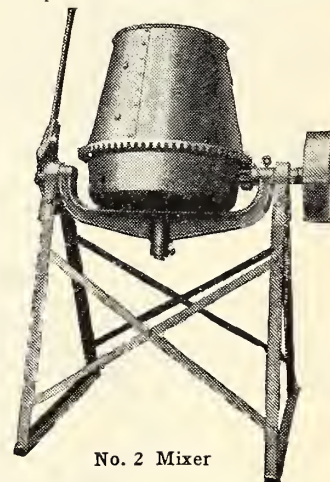
The Jumbo Concrete Mixer

Have you ever figured out just how much time and money a good Concrete-Mixer would save you?

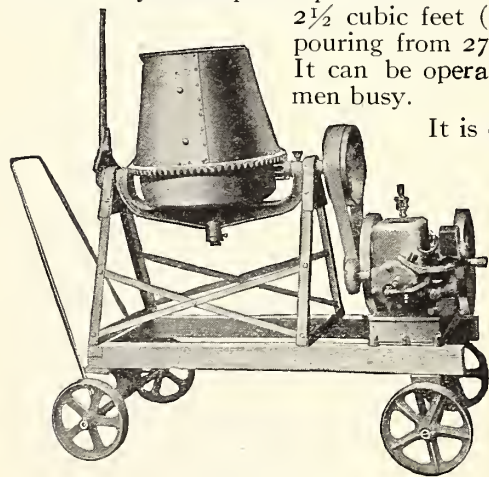
A Jumbo, for example, with a squad of four men, will do the work of from 8 to 10 men at hand-mixing, which means a saving of at least \$15 a day—and a better mix can be obtained.

The Jumbo was designed, after months of careful study, by experienced engineers. Their object was to develop a Mixer, simple in design, and yet rugged enough to hold up for years of constant service.

No. 2, shown at the right, meets the requirements of the farmer or contractor who already has a power plant of one horse power or over. It has a capacity of $2\frac{1}{2}$ cubic feet (one wheelbarrow load) and is capable of pouring from 27 to 45 cubic yards of concrete per day. It can be operated by one man but it will keep four men busy.



No. 2 Mixer



No. 12 Outfit

It is easy to load and easy to dump. Worked to capacity it will mix one batch a minute and mix it thoroughly. There will be no weak or porous spots in the finished job as is too often the case when the old unscientific method of hand-mixing is used.

Here are but a few of the jobs on which the Jumbo will show a profit: sidewalks, silos, foundations, cisterns, hog houses, barn floors, manure pits, storage cellars, fence posts, drinking troughs, rough plastering, septic tanks, and culverts.

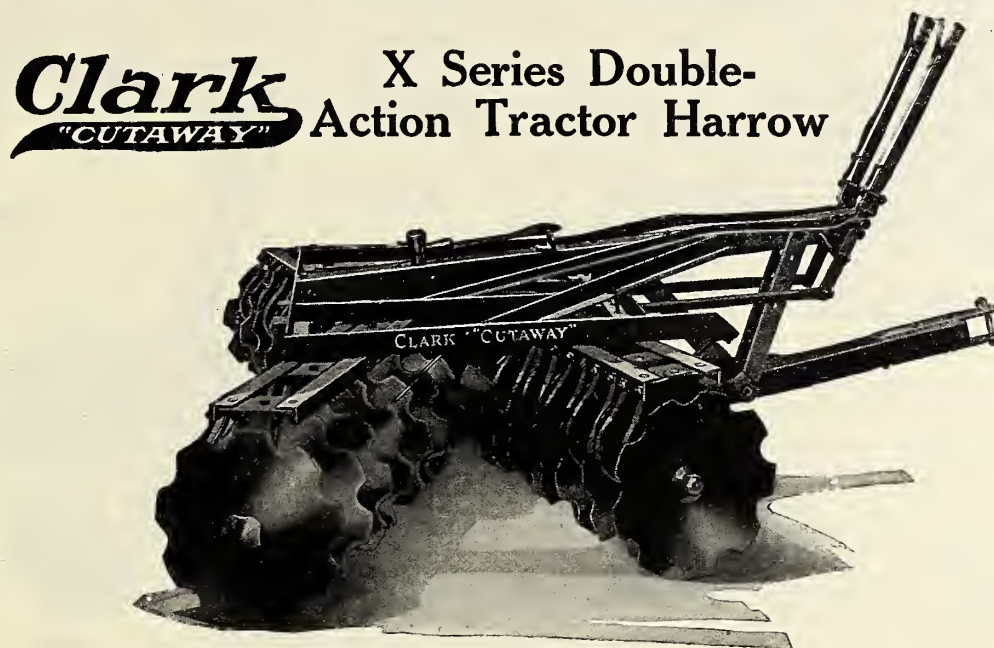
A rugged reliable Mixer for the farmer and contractor. Price \$27.

Jumbo No. 12 Outfit is a complete mixing unit easily transferred from one job to another and ready for operation the minute it is placed in position. It consists of the Jumbo Mixer, mounted on a portable truck with the $1\frac{3}{4}$ horse power Little Jumbo Engine. Price \$92.

Ask for Special Circular.

Clark Cutaway Tractor Harrows

The Clark Cutaway Tractor Harrow was the first disc built especially for tractors. It was a success from the first, because every important feature in it has been tested out for years in the horse machine. The Clark Cutaway is a *has-made-good* engine Harrow. It is of the Clark Cutaway double-action type with such changes as have been found essential to give absolutely perfect service in tractor use.



This Harrow has a *rigid frame* of angle steel which holds the rear discs firmly in position to cut midway between the cuttings made by the front discs. By this means, the ground is cut every 3 inches, and left thoroughly pulverized and level. Clark CUTAWAY Forged Edge Discs, made of cutlery steel and *forged* sharp, are used. Forging the edge of the disk sharp condenses or refines the steel, making it far better able to resist wear and bending than if it were merely ground sharp. The best bearings for the purpose are used—CLARK CUTAWAY Dust-Proof Bearings. Years of experience have proven these bearings to be the best for Disc Harrows. They are made of hardwood, oil-soaked and enclosed in dustproof boxing. The oil is dropped through the hollow standards directly onto the bearing spools. These bearings will last for many years and give perfect satisfaction under the hardest service.

Compactness, rigidity, sharp discs, and dustproof lubrication makes *light draft*.

The hitch allows a wide range of adjustment and a perfect line of draft can always be maintained. Two levers are placed on the end of the stub pole where they can be conveniently reached by the operator from the Tractor seat. Each lever controls a set of front and rear gangs. This is important, especially in orchard work, where short turns are necessary at ends of rows. Shifting of gangs is easily done while the Tractor is in motion.

Either cutout or solid discs are furnished at the same price. Solid discs throughout, or solid discs in front with cutout discs in rear are furnished at the same price as with all discs cutout. Special catalogue giving further details mailed on request.

SIZES AND SPECIFICATIONS

Size	No. of Discs*	Diam. of Discs	Width of Cut Rear Gangs	Weight	Price
X-4	16	18 in.	4½ ft.	585 lbs.	\$78 00
X-5	20	18 in.	5½ ft.	675 lbs.	92 00
X-6	24	18 in.	6½ ft.	835 lbs.	102 00
X-7	29	18 in.	7½ ft.	965 lbs.	110 00
X-8	33	18 in.	8½ ft.	1085 lbs.	140 00
X-9	37	18 in.	10½ ft.	1505 lbs.	178 00

*Machines having seven or more discs on each gang are equipped with center disc.
Ask for complete Catalogue showing A6 and A7 series with 16-inch discs.

Clark

"CUTAWAY"

Double Action Disc Harrows

Made in Regular and Extension Heads
and in sizes for all

The illustration shows the Clark "Cutaway" Double Action—Regular. Observe that this machine is built with all four gangs attached to *one rigid main frame*. The rear discs are held so that they cut and pulverize the soil between the furrows cut by the fore discs. All the soil over which the machine passes is thoroughly worked. Moreover, the soil thrown outward by the fore discs is thrown back by the rear discs and the surface of the land is left level. This Clark "Cutaway" Double Action Harrow constantly works at leveling the ground, cutting down the high places, filling in the hollows, leaving a seed-bed in both places.

Also observe the compactness of this Harrow. The length of the entire load (that is, the distance from the hitch to the extreme rear end of the machine) in the Clark "Cutaway" Double Action is about one-half the length of the load in the tandem and trailing types. The draft is, therefore, only two-thirds as much as in these substitute machines of corresponding size.

There is no tongue truck on this machine. There is absolutely no use for it; yet nothing is sacrificed. Instead, money is saved the buyer.

The discs on all Clark "Cutaway" machines are made of special cutlery steel, and forged sharp. Either cutaway or solid discs are furnished. The quality and price are the same. Unless solid discs are specified, all machines are equipped with cutaway discs.

The bearings are the famous Clark hardwood, soaked in oil.

Note the jointed pole, which may be attached or detached in one minute, making it possible to use the Harrow either as a tongueless or a tongue machine at any moment.

The Clark "Cutaway" Double Action—Extension Head—is the same as the Clark "Cutaway" Double Action—Regular—shown in the illustration, making it possible to extend the gangs out beyond the team for orchard cultivation. They close up for general work.

PRICES

	Regular Heads	Extension Heads
A-4, 16 16-in. discs, double action, two-horse hitch, 4½ ft. cut..	\$62 00	\$66 00
A-5, 20 16-in. discs, double action, three-horse hitch, 5½ ft. cut..	75 00	79 00
A-6, 24 16-in. discs, double action, four-horse hitch, 6½ ft. cut..	83 00	88 00
X-4, 16 18-in. discs, double action, three-horse hitch, 4½ ft. cut..	77 00	80 00
X-5, 20 18-in. discs, double action, three-horse hitch, 5½ ft. cut..	86 00	91 00
X-6, 24 18-in. discs, double action, four-horse hitch, 6½ ft. cut..	99 00	105 00

If two-horse hitch is wanted in place of three, or three-horse hitch in place of four, deduct \$1 from the above prices.

Descriptive catalogue and prices on other sizes of double action and reversible single action Harrows mailed on request

Reversible Single Action Harrow

The Clark "Cutaway" Single Action Harrow was built up to a standard measured by actual field conditions of the most severe type. Observe in the illustrations that the head is built directly on top of the gangs. Note the tongue, seat, braces and levers are all fastened to it, thereby making the discs carry the entire weight of the machine. This construction gives such a perfect balance that there is practically no weight on the horses' necks, and makes the use of the tongue truck optional with the user. Without a tongue truck the hitch is placed back close to the machine and the draft is the very minimum.

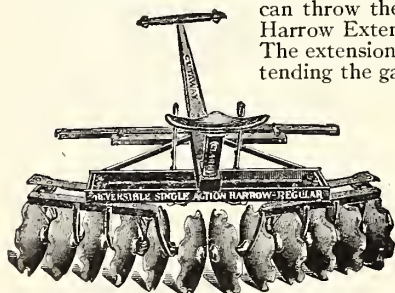
The "Cutaway" Single Action Harrow is reversible; that is, the gangs can be swung end for end, so that the soil may be thrown either out or in. To reverse, it is only necessary to pull the cotter pins that hold the lever links, drop the links, swing the gangs around and reattach links.

This reversible feature is important to the orchardist. It makes it possible for him to ridge the land and level it as he desires. He can throw the soil to his trees at one cultivation and away at the next. The "Cutaway" Single Action Harrow Extension enables the orchardist to cultivate underneath the low-spreading branches of his trees. The extension head Harrow can also be closed up for regular field-work. No extra parts are needed for extending the gangs.

PRICES

	Regular Steel Head	Extension Steel Head
A-5. 10 16-inch discs, 2-horse hitch, 5-ft. cut.....	\$41 00	\$43 00
A-6. 12 16-inch discs, 3-horse hitch, 6-ft. cut.....	46 00	49 00
X-5. 10 18-inch discs, 2-horse hitch, 5-ft. cut.....	44 50	47 00
X-6. 12 18-inch discs, 3-horse hitch, 6-ft. cut.....	53 00	55 00

If Tongue Truck is wanted instead of the Long Pole, add \$7 to above prices.
If both Tongue Truck and Long Pole are wanted, add \$9 to above prices.



It is now nearly fifty years since George M. Clark made the first "Cutaway" Harrow. From that time the standards of usefulness and quality which he originated have been consistently maintained. Clark's Cutaway Implements are today examples of the best which can be produced in that line of tools, both in regard to design and construction. They carry all of the most improved features which have been developed and shown to be of value to the farmer. It will be recalled that most of the essential features in disk implements today were originated by Mr. Clark.

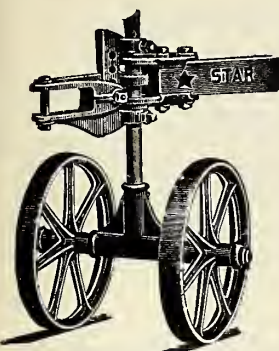
Star Disc Harrow

The Star Disc Harrow contains all features of any importance in a Disc Harrow and includes, besides, many advantages and conveniences among which we mention the following:

Frames and Braces. The strong channel-steel frame and braces that hold both ends of each gang down to their work, and at the same time give the desired flexibility.

Seat. A seat so arranged that it can be adjusted for a light or heavy driver and all excess of weight taken off the horses' necks.

Pole. A pole so raised that the whiffletrees can be hung under it where they belong without any inconvenience.

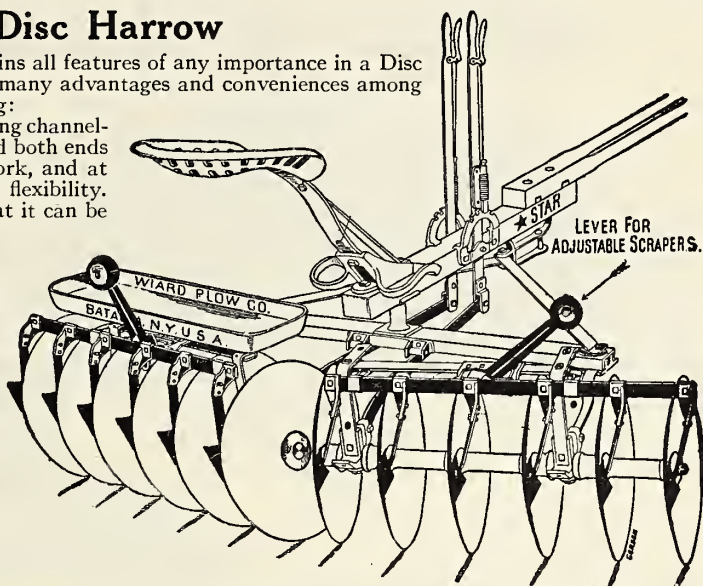


Fore Truck

Rollers. Anti-friction rollers over the draw irons, by which the gangs can be placed at any angle without strain or friction and with least power.

Three-Horse Offset. This offset is bolted to the short or rear part of the pole and extends to the right, the long pole being then bolted to the right-hand side of the offset; this brings the middle horse directly in the center of draft and no side draft results.

Complete Machine. The whole is excellently finished and made with every modern improvement and convenience, and is operated with greatest ease for man and team.



Width	No. of Discs	Sizes of Discs	Description	Equipments Furnished	Without Steel Weight Boxes	Add for Steel Weight Boxes
3 ft.	6	16 in.	1-horse.....		\$41 75	\$3 00
4 ft.	8	16 in.	Small 2-horse.....	2-horse	44 00	3 00
5 ft.	10	16 in.	Light 2-horse.....	2-horse	47 50	3 00
6 ft.	12	16 in.	2- or 3-horse.....	2- or 3-horse	52 50	3 00
7 ft.	14	16 in.	Heavy 2- or 3-horse.....	2- or 3-horse	57 00	3 50
8 ft.	16	16 in.	Heavy 2- or 3-horse.....	2- or 3-horse	61 25	3 50
5 ft.	10	18 in.	2-horse.....	2-horse	51 00	3 00
6 ft.	12	18 in.	Heavy 2- or 3-horse.....	2- or 3-horse	56 75	3 00
7 ft.	14	18 in.	Heavy 2- or 3-horse.....	2- or 3-horse	62 75	3 50
8 ft.	16	18 in.	3- or 4-horse.....	3- or 4-horse	68 50	3 50

All of above prices are for Harrows with scrapers and long poles, without fore trucks and neck-yokes. If neck-yoke is wanted, add \$1 to above prices. Harrows with fore truck instead of long pole, \$6.75 extra; with both fore truck and long pole, \$9 extra. Fore truck when purchased separately, \$10. No extra charge for three-horse equipment. Ask for special circular.

Meeker Smoothing Harrow

It Pulverizes, Smooths and Rolls

MAKES THE HEAVIEST SOIL FINE AND SMOOTH

The Meeker Smoothing Harrow is a perfect pulverizing and smoothing Harrow and land-roller combined.

As the illustration shows, it has four sets of rollers containing 46, 58 or 82 discs, depending upon the size, the discs being set so as to overlay or meet.

These discs grind up all lumps, leaving the soil fine and smooth. The discs of one roller work between those of the other. This prevents clogging in damp soil and makes the seed-bed very fine. The board in the center, set at an angle, can be adjusted up and down and serves as a leveler.

The use of a Meeker Harrow saves the work of raking, and does the work of a dozen men. As one experienced farmer remarks in telling how he prepared an onion bed, "once lengthwise and once crosswise will usually fit a field in better shape than many times over with any other tool." After the Meeker Harrow has gone over the land it looks as if a garden rake had been used.

Every farmer who has one or more acres of fine seed under cultivation needs a Harrow that eliminates hand-raking—one that makes the soil as fine as dust. No matter what kind of soil it is the Meeker Harrow prepares it perfectly for fine seeding—a perfection that no other implement approaches.

PRICES

4-ft. 6-in. x 4-ft. Harrow, with 46 8-in. discs, 175 lbs.....	\$26 25	8-ft. x 6-ft. Harrow, with 82 8-in. discs, 300 lbs.....	\$40 50
6-ft. 8-in. x 6-ft. Harrow, with 58 8-in. discs, 200 lbs.....	29 25	8-ft. x 6-ft. Harrow, with 82 10-in. discs, 350 lbs.....	46 50
6-ft. 8-in. x 6-ft. Harrow, with 58 10-in. discs, 250 lbs.....	35 50		

Also a very valuable implement for golf-courses. Ask for special circular.

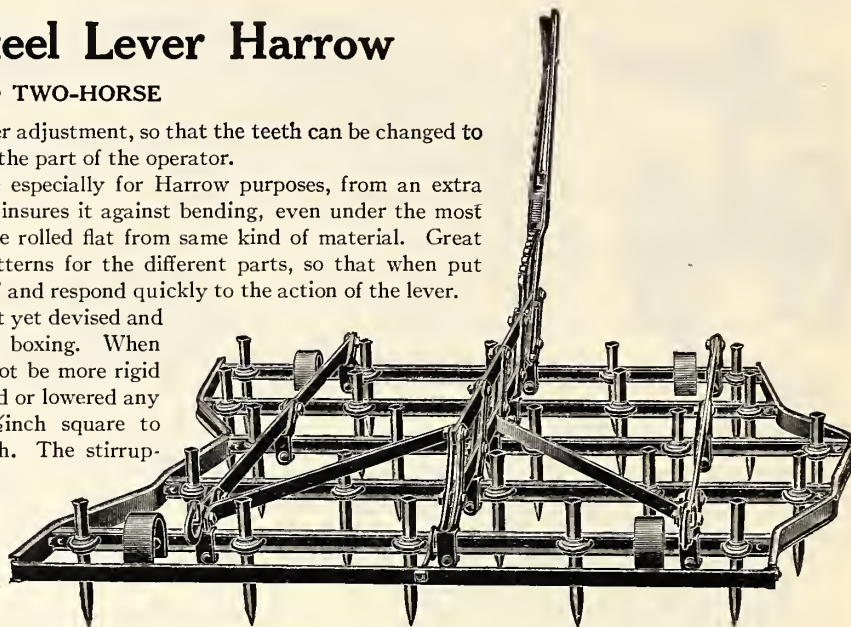
"Columbian" Steel Lever Harrow

ONE- AND TWO-HORSE

The Columbian Harrow is made with lever adjustment, so that the teeth can be changed to any slope quickly and with little exertion on the part of the operator.

The main-bars are U-shaped, and made especially for Harrow purposes, from an extra quality of steel, very high in carbon, which insures it against bending, even under the most severe strain. The cross-bars and braces are rolled flat from same kind of material. Great pains have been taken in preparing the patterns for the different parts, so that when put together they will be free from "lost motion," and respond quickly to the action of the lever.

The tooth-clamp is without doubt the best yet devised and consists of stirrup bolt and back and front boxing. When fastened with this device, the teeth would not be more rigid if a part of the bar itself. Teeth can be raised or lowered any distance, and any size can be used, from $\frac{1}{2}$ inch square to $\frac{3}{4}$ inch square. Furnished with $\frac{5}{16}$ -inch teeth. The stirrup-bolt clamp is fixed to take the common stock teeth carried by all dealers. It is securely braced and nicely finished. One-horse, with 25 teeth, one section, \$13; two-horse, with 50 teeth, two sections, \$23; two-horse, with 60 teeth, two sections, \$25.

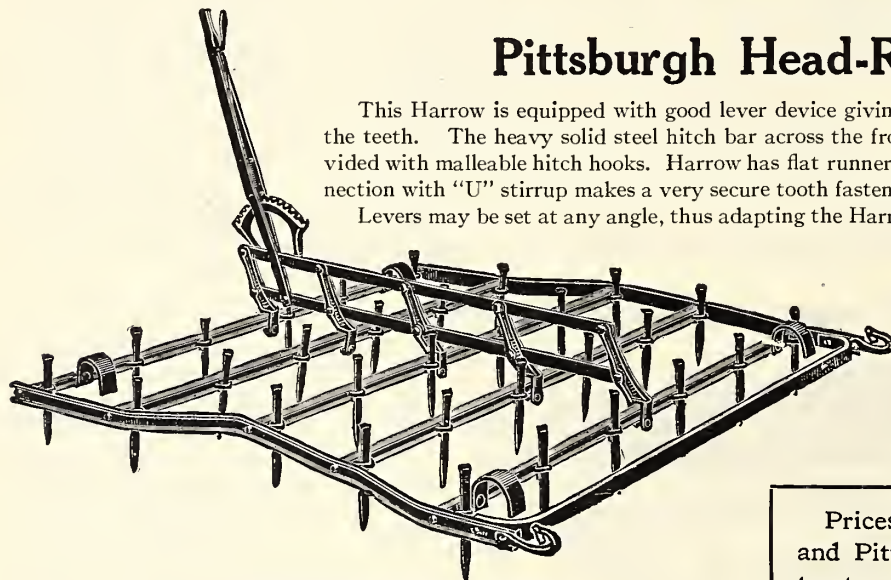


Showing 25-Tooth Section of Harrow

Pittsburgh Head-Rail Harrow

This Harrow is equipped with good lever device giving instant adjustment and desired slant to the teeth. The heavy solid steel hitch bar across the front braces the Harrow securely and is provided with malleable hitch hooks. Harrow has flat runners, and the close-fitting back boxing in connection with "U" stirrup makes a very secure tooth fastening.

Levers may be set at any angle, thus adapting the Harrow to general purpose work or for finishing and smoothing operations. It will also answer the purpose of a weeder for the first cultivation of corn and potatoes. Furnished with $\frac{5}{16}$ -inch teeth. One-horse, with 25 teeth, one section, \$12; two-horse, with 50 teeth, two sections, \$20; two-horse, with 60 teeth, two sections, \$21.50.



Showing 30-Tooth Section of Harrow

Prices on larger sizes of Columbian and Pittsburgh Head-Rail Harrows for tractor use will be quoted on request.

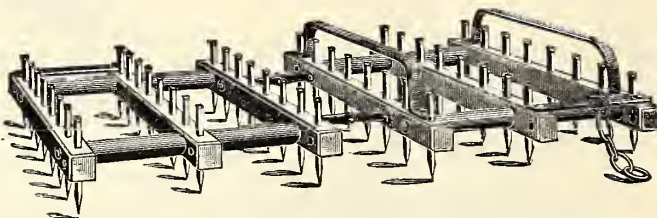
Malta Spike-Tooth Harrow

The Malta Wood-Frame Harrows are built of the very best materials throughout.

The wood work is of the best quality and of thoroughly seasoned white oak. The frames are closely jointed, and made secure and solid by steel rods passing entirely through them. All tooth bars are riveted at each end.

The hinges work free, allowing Harrow to adapt itself to uneven ground. Runners and teeth are of the best quality steel.

On account of being better made and better finished than other Harrows of this style on the market, they are having the preference. One-horse, with 32 teeth, one section, with runners, \$10.50; two-horse, with 48 teeth, two sections, like above cut, \$16.50.

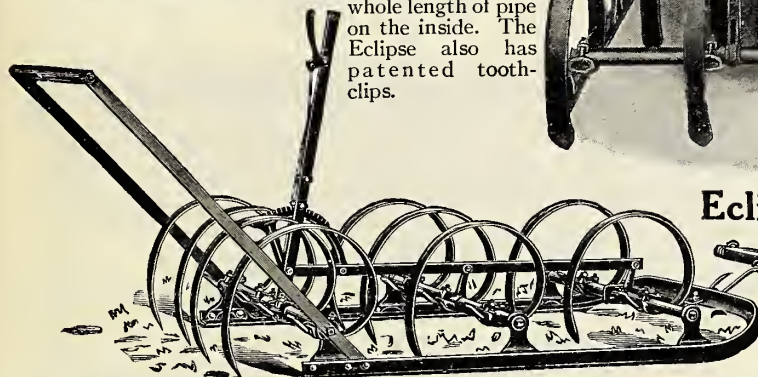


Eclipse Pipe Bar Lever Harrow

A runner Frame Harrow—the popular style frame—holds a prominent position with the trade. It has stood the test of years. Kept thoroughly improved and up-to-date.

Only Three Runners of high carbon "T" steel are used on the Eclipse, which give the Harrow great clearance and avoid clogging. This construction also causes the Harrow to always run steadily and cut uniformly. All the runners have steel renewable shoes. The nose of the Harrow is sloped so as to easily avoid obstructions.

Tooth Bars of 1½-inch diameter steel pipe make a very strong frame, with light weight. These bars are attached to the malleable frame brackets by steel rods running the whole length of pipe on the inside. The Eclipse also has patented tooth-clips.



ator controls the Harrow the same as a cultivator. The frame is made in one piece, of "T" steel, the same size and weight as used on the two-horse Eclipse Harrows and is sloped at the front to easily avoid obstructions. It also has steel renewable shoes. Width 36 inches. Weight 131 lbs. With handles, \$19.

Iron City Pipe Bar Lever Harrow

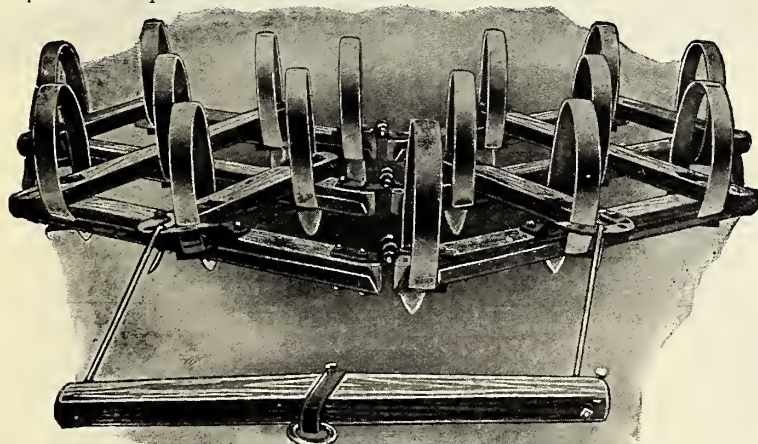
The Iron City Spring-Tooth Steel frame Lever Harrow shown here represents one of the most popular types of this class of Harrows.

The Iron City has angle steel frame, runner style, and the front of the Harrow is constructed with a view to prevent the gathering of trash.

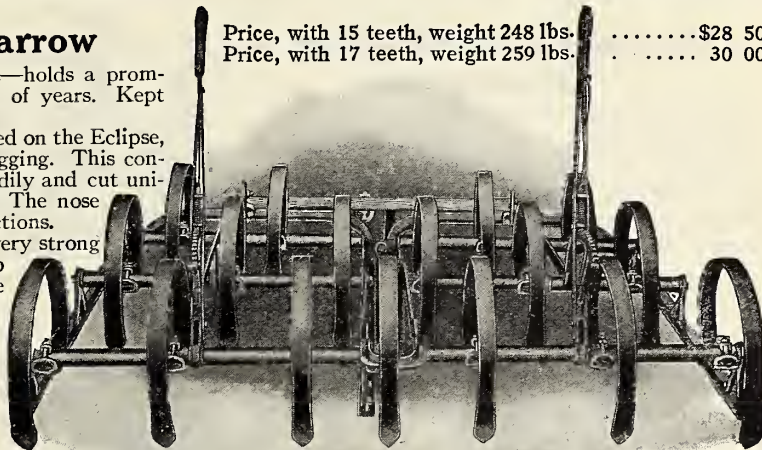
Renewable steel shoes are bolted to the under side of all frame angles, and can be replaced at moderate expense.

The tooth bars are steel pipe, to which the teeth are bolted and held securely with the assistance of spanner clips.

All teeth are carefully tested before shipment and are guaranteed against defects. Two-section, with 15 teeth, weight 225 lbs., \$26; two-section, with 17 teeth, weight 240 lbs., \$27.50. Prices on three or four-section Harrows will be quoted on request.



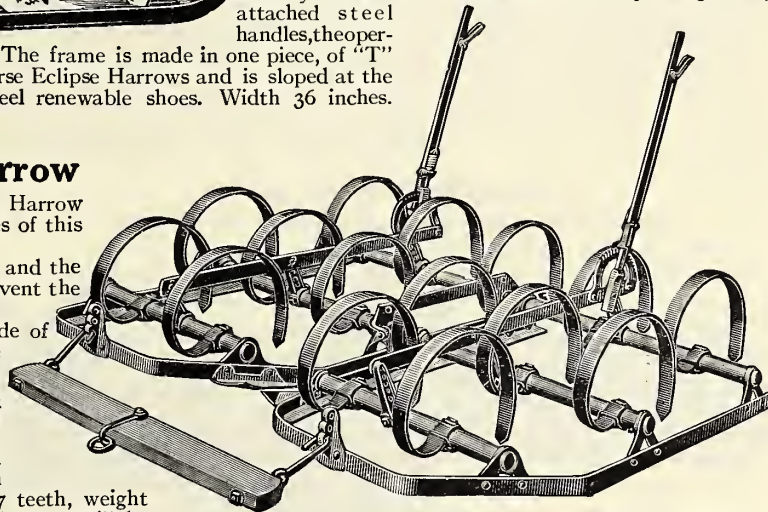
Price, with 15 teeth, weight 248 lbs.\$28 50
Price, with 17 teeth, weight 259 lbs. 30 00



Eclipse Nine-Tooth Lever Harrow

A very popular Harrow, and is used extensively for gardens, small farms, and orchards.

It is neat and perfect in construction and very strong, and is thoroughly guaranteed. Made entirely of steel and malleable iron. By using firmly attached steel handles, the operator



Pittsburgh Perry Wood-Frame Harrow

Steel Lined, Guarded, Protected Bolt Heads, Perfect Tooth Seat, Adjustable Hitch

THE BEST OF THE "WOOD FRAMES"

The Best Wood-Frame Harrow on the market. Beams full 3 inches; linings ½-inch angle steel; bolts ¾-inch; teeth are full length and weight, tempered in oil and fully warranted; our tooth fasteners are channel steel. Steel Braces support and strengthen the outer end of the Harrow.

These Harrows are well made of best oak and hinged properly so that they will not buckle in the middle, but ride evenly, pulling all teeth in the ground at about an even depth.

Teeth are made from open hearth, high carbon spring steel, oil-tempered and tested.

Price, with 16 teeth, weight 191 lbs., \$19.50; with 18 teeth, weight 209 lbs., \$20.50.

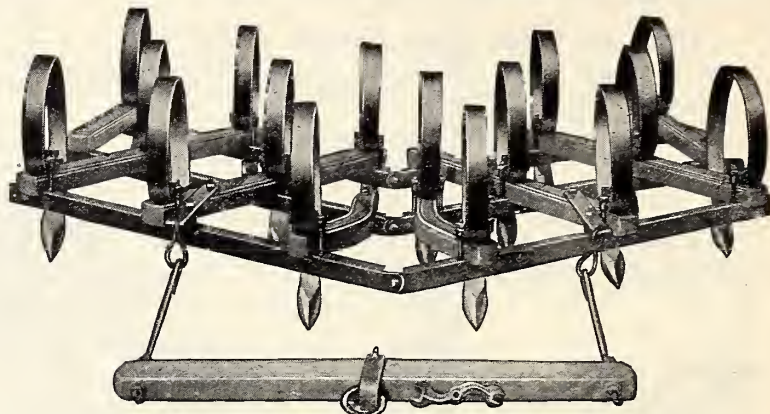
Pittsburgh Combination Harrow

The illustration tells the story—a strong, simple, and efficient Harrow.

Beams. The under side of the Pittsburgh Combination Harrow is constructed of high carbon angle steel beams, and the upper side of best oak beams, so there is no wear against the wood parts.

Teeth. Best spring steel, formed so that the pitch can be changed to suit the operator. They fasten on top of the frame and the bolt heads are protected so they will not wear off. Malleable Iron Tooth Clips and $\frac{3}{8}$ -inch bolts.

Stump guards (or braces) placed to protect the frame and make it perfectly rigid. With 16 teeth, weight 161 lbs., \$19.50; with 18 teeth, weight 174 lbs., \$20.50.



Wiard Giant Spring-Tooth Harrows

Built Especially for Tractors

These Harrows are the strongest, heaviest, and most efficient tools of the kind on the market, and have received the unqualified endorsement of every farmer who has used them. They are furnished in both Shoe and Wheel Type with any number of sections, each section containing 10 teeth and covering an actual space of 42 inches wide. Allowing 2 inches for play between sections, a four-section Harrow would cover an actual space 14½ feet wide, and would weigh 740 pounds for Shoe Harrow, or 844 pounds for Wheel Harrow.

The Shoe Type Harrow is built with strong tooth-bar supports that give unusual clearance for trash or stone when used with teeth deeply in the earth. It has removable high-carbon wheel shoes to protect the frame.

The Wheel Harrow is built with heavy high wheels, assuring the same clearance as on Shoe Harrows. All wheels interchangeable and have chilled hubs and chilled bearings. The rear wheels are stationary and the front is a castor wheel.

Ask for special illustrated circular giving all details and prices

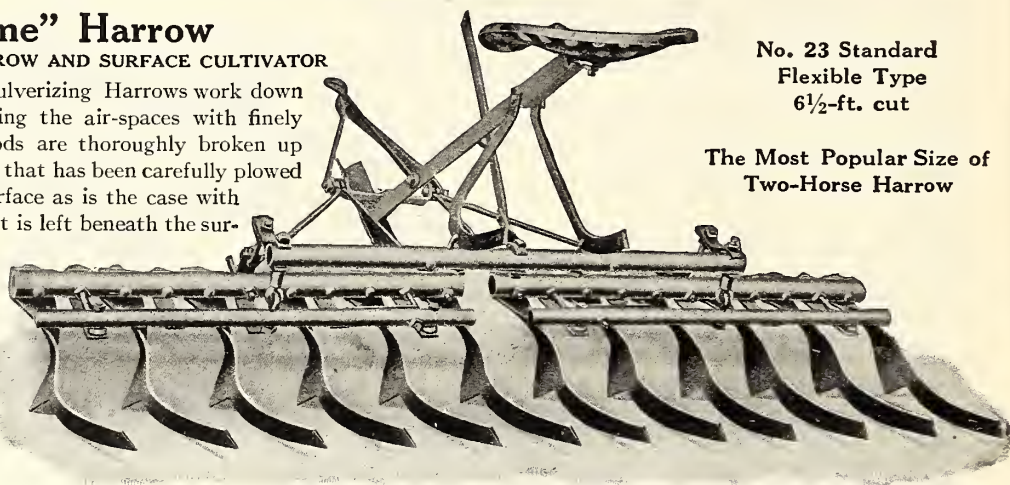
"Acme" Harrow

A PULVERIZING HARROW AND SURFACE CULTIVATOR

The colters on "Acme" Pulverizing Harrows work down between the furrow slices, filling the air-spaces with finely pulverized soil—lumps and clods are thoroughly broken up and pulverized; trash or stubble that has been carefully plowed under is not dragged to the surface as is the case with many other types of Harrows but is left beneath the surface where it rapidly rots and adds humus to the soil. The seed-bed prepared by the "Acme" Harrow is well compacted so that the seed will germinate rapidly; the surface is finely mulched so that the moisture is conserved.

Everything a Harrow ought to do, the "Acme" does. It cuts, crushes, levels, turns, smooths all in one operation, thus completely fitting the seed-bed for the seed. We have records of colters in use twelve years before being replaced with new ones. The frame of the Harrow will last indefinitely, and after the colters have been worn out new ones can be procured which will give you a Harrow just as good as when it originally left the factory.

In addition to the flexible type we are also manufacturing now Harrows of rigid frame construction like the No. 17 priced below. We have sold the "Acme" Harrow for many years and customers who have worn out their second Harrow tell us that they can find no other Harrow that can do the work of the "Acme" in preparing the ground for the seed.



No. 23 Standard
Flexible Type
6½-ft. cut

The Most Popular Size of
Two-Horse Harrow

Size	Weight	Width	Description	Standard Type
G	62 lbs.	3 ft.	1 horse, 1 section, 6 colters	\$13 00
H	100 lbs.	4 ft. 4 in.	1 horse, 1 section, 8 colters	21 00
*17	115 lbs.	6 ft. 6 in.	2 horse, 1 section, 12 colters	23 00
23	130 lbs.	6 ft. 6 in.	2 horse, 2 section, 12 colters	27 00
26	160 lbs.	8 ft. 6 in.	2 horse, 2 section, 16 colters	33 00

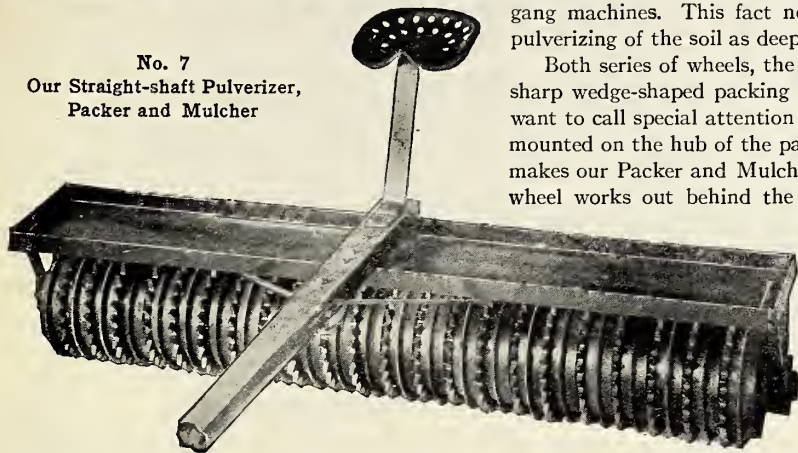
*Rigid Frame.

Prices upon other sizes, also for Garden Tractor sizes, quoted on request

The Western Pulverizer, Packer and Mulcher

Is a great improvement over all other kinds of Packers or Field-Rollers of every known make, whether single or double type. The Western is a machine made up of two series of wheels but has the advantage of having them all mounted on one axle, so that the combined packing and crushing power of both series of wheels is delivered at one time and at one point and is not divided, as in double-gang machines. This fact no one can dispute—that packing and firming and pulverizing of the soil as deep as plowed is all important.

No. 7
Our Straight-shaft Pulverizer,
Packer and Mulcher



Both series of wheels, the sprocket, or mulching wheel, as we call it, and the sharp wedge-shaped packing wheel are arranged on the axle for work. We also want to call special attention to the loose play the mulcher wheel has where it is mounted on the hub of the packer wheel. This is the patented arrangement that makes our Packer and Mulcher do work no other Roller can do. The Mulcher wheel works out behind the packer wheels because of this play, just enough to spread the ridges formed by the packer wheels, and leaves the surface with a loose mulch instead of little packed furrows. The mulcher wheels also act as cleaners and prevent dirt from gathering between the wheels and covering the machine. Leaving the surface mulched and keeping the machine clean are very important features no other Field-Roller of any description can claim.

THE WESTERN EXCELS ALL OTHER SIMILAR TOOLS IN

1. Preparing the seed-bed for any crop.
2. Breaking the crust on winter wheat and spring-seeded grain, mulching at the same time.
3. Rolling planted corn.

Ask for special catalogue giving details and illustrations

PRICES:

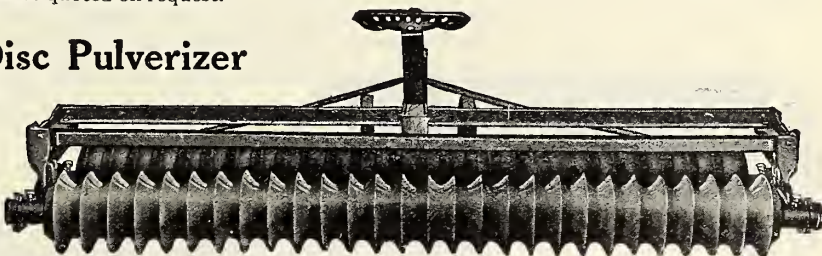
7-ft. Single Section, Medium, 2-Horse, Weight 800 lbs.....	\$70 00
8-ft. Single Section, Large, 2-Horse, Weight 900 lbs.....	77 50
Double-trees and Neckyokes extra, \$3.50; larger sizes quoted on request.	

Buch's Double Gang Disc Pulverizer

This tool has two gangs of iron discs which crush and cut lumps, pack out all air-spaces, and level the surface of the field, all in one operation.

The discs of the back gang come between those of the front gang so that no lumps are missed. This Pulverizer, with a harrow for bringing up the lumps to the top will make a perfect seed-bed in any soil. Has quick detachable discs, which can be removed in two minutes' time for straddling corn rows.

The discs of the front gang build up a set of ridges and the back gang, coming half way between, splits and works these ridges over, thus stirring the soil.



PRICES

8 ft.—21 front discs 15 in. diam., 22 rear 12 in.; weight 1,000 lbs. \$82.50.
Fore carriage instead of long pole, extra \$7.50.
Doubletrees and Neckyoke, extra \$3.

Pittsburgh Steel Land Roller

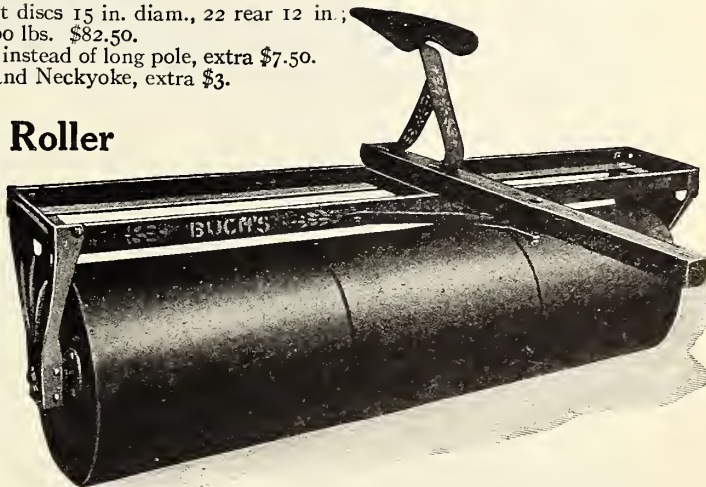
Drums or rolls are made of heavy, 12-gauge high carbon steel, with pressed steel ends, and will not dent.

Axles are 1 3/8 inches in diameter; angles 2 1/2 x 2 1/2 x 1/4 inches.

Hangers are of 2 x 3/8 inches high carbon steel, with heavy cast tops, and regularly furnished with oil-soaked wood boxings.

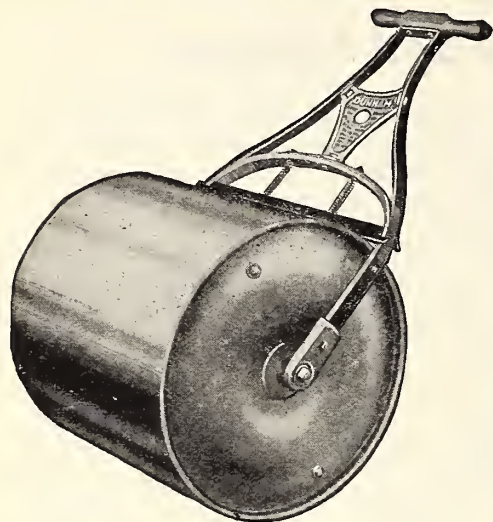
The frame is constructed so that it may be used as a weight-box should additional weight be required.

Pole sets on top of frame, thus enabling us to use shorter and more rigid hangers. The hitch is underneath the tongue, reducing the draft and neck weight to a minimum. 8-foot, 3 section, 24 inches in diameter. Weight 585 pounds, \$42.50. Doubletrees and neckyoke, \$3 extra.



Prices on larger and smaller sizes quoted on request

Dunham Water-Weight Lawn Roller



This Roller has a steel drum into which water can be poured until the Roller is just the weight for the work at hand.

For soft lawns it will not need so much water, while for firm turf, tennis-court or drives it can be made as heavy as desired. When through rolling, all water is emptied out and the Roller is light enough to be easily handled and put in the basement or garage.

The drum is made of heavy steel plates, carefully welded to form a solid one-piece container for the water.

	Diameter inches	Length inches	Sec- tions	Weight empty	Weight filled with water	Price
No. 5	18	24	1	85 lbs.	265 lbs.	\$18 00
No. 7	24	24	1	110 lbs.	420 lbs.	21 00
No. 9	24	32	1	130 lbs.	565 lbs.	23 50
No. 2	14	24	1	68 lbs.	175 lbs.	12 00
No. 4	18	24	1	82 lbs.	265 lbs.	14 50

Nos. 5, 7, and 9 have roller bearings and handle brace as shown in cut.

Nos. 2 and 4 have plain bearings without arched brace between handles.

Putting Green Rollers

These Rollers have perfectly smooth surface and round edge. Each drum will roll when turning around in its own radius.

No. 700 Cast Iron, with four 12-inch sections, 10-inch diameter, weight 160 lbs. Price, \$31.50.

No. 701 Wood Drum, with four 12-inch sections, 10-inch diameter, weight 160 lbs. Price, \$27.

Ask for circular

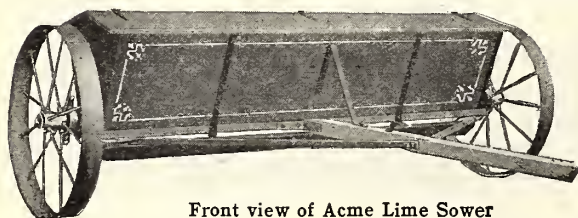
Golf Rollers

These have cast-iron drums with face ground smooth and outer edge rounded to avoid cutting sod. A strong, durable Roller that can be furnished with pole shafts or tractor hitch. Made in seven different sizes, weighing from 1,150 to 1,950 pounds.

Ask for special circular and prices

Acme Lime and Fertilizer Sower

This machine, being mostly of steel construction, is very durable and simple, with few parts to wear out, and is guaranteed to give satisfaction



Front view of Acme Lime Sower

Steel hopper ends, angle steel base, independent wheel drive, with ratchet and throw-out device, rotary wing force feed, large steel wheels, 36 inches high, 4-inch tires.

The divided axle is made of 1¼-inch square steel. The end bearings are fitted with compression grease-cups and have encased felt washers to keep lime and grit from working into bearings. The center bearing is fitted with oil-tube—thus insuring a very easy running Spreader.

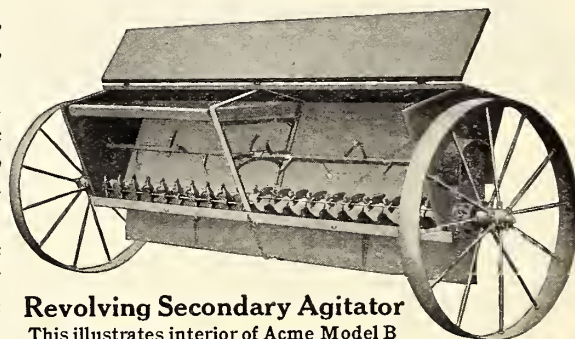
The feeds, 20 in all, are attached direct to the square axle and they are driven by this axle which is divided in the center and revolve with the axle, thus forcing the fertilizer out the discharge openings in bottom of hopper. The shifter levers on rear of hopper regulate the desired amount, to be sown and are also used for shutting off openings in bottom entirely.

PRICES

Model A, without Agitator. Weight, 425 lbs. \$62.50.

Model B, with Agitator. Weight 510 lbs. \$72.50.

The Acme Lime Spreader is built in the standard 8-foot size, with capacity of 10 bushels. It will distribute evenly and accurately lime and ground limestone, commercial fertilizer, gypsum, ashes, nitrate of soda, etc., in amounts ranging from 150 to 8,000 pounds per acre, according to materials sown. There is no better Lime Sower made—you will say so after using one.

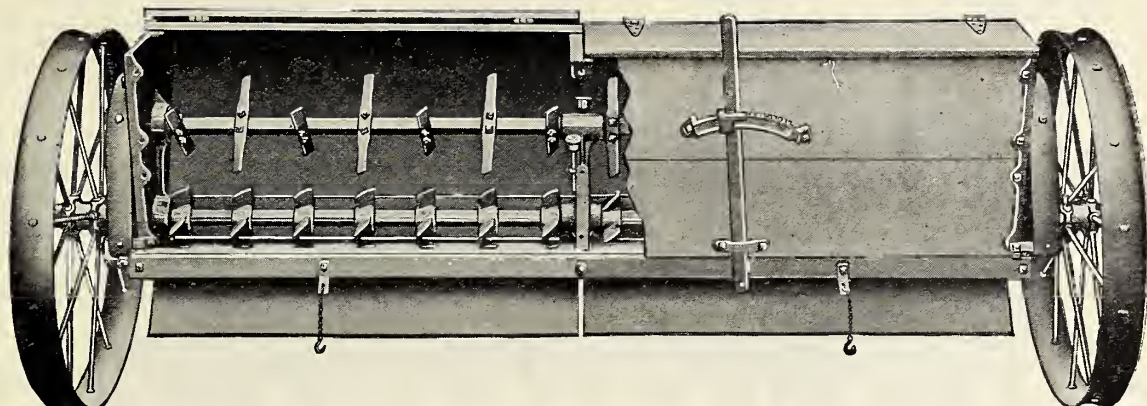


Revolving Secondary Agitator

This illustrates interior of Acme Model B

The Acme Sower is furnished with or without a revolving agitator (Model B with) (Model A without). This agitator is desirable only when sowing damp materials which are inclined to bank or cake over the feeds, the agitator keeping the material loosened up so it has to fall down on the force feeds and insures a more even distribution.

Moline Lime Sower—Style B



The Moline Lime Sower is not only adapted to spreading ground limestone but will spread commercial fertilizer, ashes, nitrate of soda, etc., equally as well.

It is strongly built and with its wide, deep hopper is capable of holding about 800 pounds of lime. It has a great range in quantity distribution—from 150 to 6,000 pounds per acre.

The scattering-boards are close to the ground so that they assist in uniform sowing and may be adjusted to prevent the wind from interfering with even distribution of fertilizer.

The agitator is driven by a divided shaft while the feeder shaft is attached direct to the axle. These feeders revolve with the axle and force the fertilizer out through the discharge holes in the bottom of the hopper. The divided axle permits the operator to shut off the feed on either side of the sower and use only half of the machine. The quantity gauge regulates the feed or the feed may be entirely closed when fertilizer is not desired on any portion of the field.

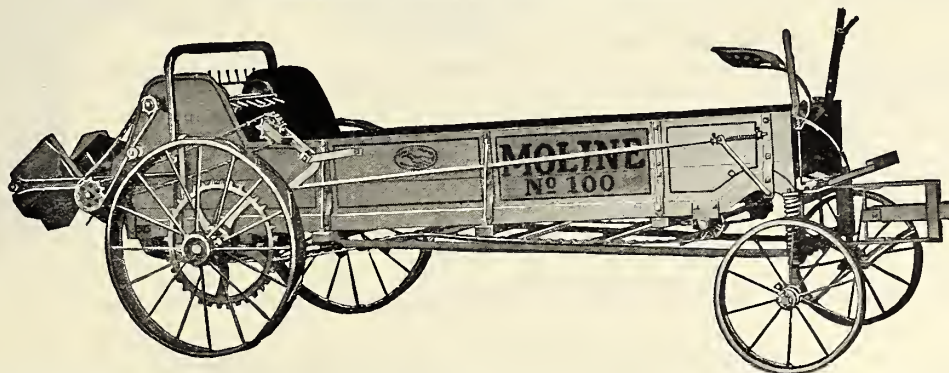
Made in 8-foot sizes

PRICES

With 2-Horse Hitch.....	\$75 00	Sifter Screens, per pair, extra.....	\$2 50
Agitator, extra.....	8 25	Double-trees and neck-yoke, extra.....	3 00

Moline No. 100 Manure Spreader

SPREADS BETTER—LASTS LONGER



A miner takes wealth from the earth and puts nothing back.

A farmer takes plant-food from the earth in his crops, but returns it to the earth in the form of barnyard manure, legumes, and fertilizers. You can not continue to raise good crops unless you build up your farm, unless you use manure.

There is money in your manure-pile—save it, do not waste it. A Manure-Spreader is the best money-making machine a farmer can buy.

With two all-steel beaters and widespread distributor, the manure is thoroughly shredded and evenly distributed—the manure covers more ground surface and is more effective. The tapered box prevents clogging and reduces friction on the box sides; tight bottoms prevent loss of liquid manure; auto turn front axle permits making short square turn; low-down box is easy to load; self-aligning bearings lighten draft; cushion spring mounted relieves frame from twisting strains. Capacity with top boards, 70 bushels; without top boards, 50 bushels. Moline No. 100 Spreader is strongly built, of light weight and light draft.

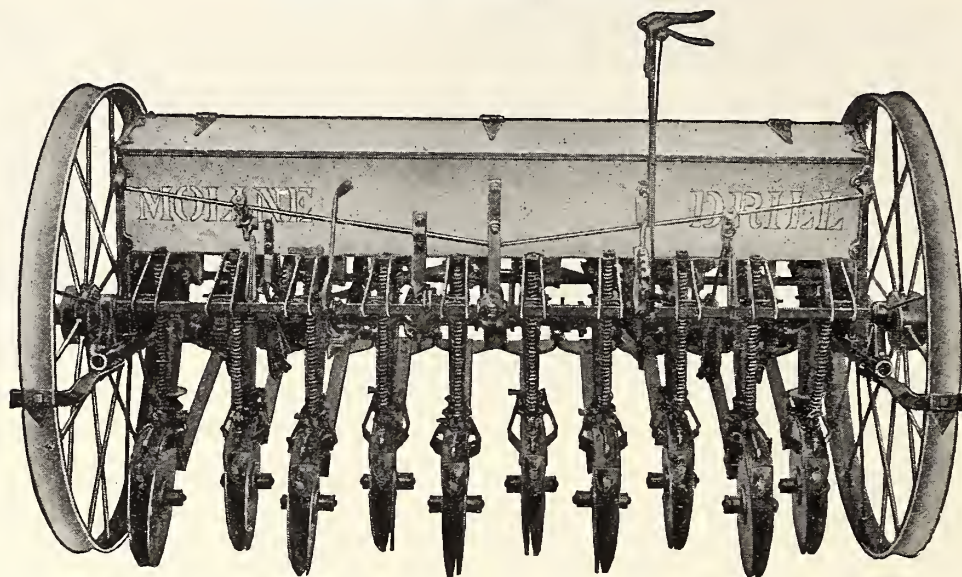
PRICES

With 2-horse Evener.....	\$175 00	Brake extra.....	\$6 50
With 3-horse Evener and Top Boards.....	182 50	Ask for special circular giving detailed description	

Moline Fertilizer Grain Drills

DOUBLE DISC. SINGLE DISC. HOE

Bigger
Crops
with Less
Seed



Even
Seeding
—
Light
Draft

Moline-Monitor Double Disc Drills save seed, increase the yield, and improve the grade of all grain crops. This has been demonstrated by many agricultural colleges and by thousands of farmers.

The Moline-Monitor is the original double disc. It deposits the seed at a uniform depth in the bottom of a wide, compact furrow with the downward turn of the discs. This insures even seeding and even growing.

Forms Wide, Compact Furrows

The two discs which are beveled on the outer edges, come tight together at the front lower quarter, forming a knife or wedge edge. As the machine is drawn forward, the discs first cut the soil the same as a rolling coulter on a plow and then wedge or split the furrow open, raising and compressing the earth on either side, which conserves moisture and makes a wide furrow. Less seed is required in such a furrow, as it has plenty of room in which to stool.

Uniform Seeding Depth

As the seed is dropped in front of the disc bearing with the downward turn of the discs, the discs aid gravity in carrying the seed to the bottom of the furrow. The discs on either side of the falling seed make it impossible for trash, dry top soil or anything else to get into the furrow before the seed. As the discs roll on, the moist earth which has just been displaced from the furrow falls back onto the seed before the dry surface dirt or trash falls in. Thus a uniform seeding depth is insured.

Every good seed sown with the Moline-Monitor Double Disc Drill grows; all sprout at the same time. This insures even growing and even maturing, obviating harvesting a crop, part of which is over ripe and part still in the milk.

Bigger Crops with Less Seed

From the above it will be seen that the furrow-opener is the vital part of a grain drill and that the Monitor Double Disc will save losses from uneven seeding, crowding, uneven ripening, and lack of moisture.

Moline-Monitor Furrow-Openers Interchange

Moline-Monitor furrow-openers, double disc, single disc, shoe and hoe, are all interchangeable on Moline-Monitor Grain Drills. Farmers frequently find that one type of furrow-openers may be better adapted to certain conditions than the ones ordinarily used. Instead of purchasing a new drill, all that is necessary is to get another set of furrow-openers.

PRICES WITH FERTILIZER AND GRASS SEED ATTACHMENTS

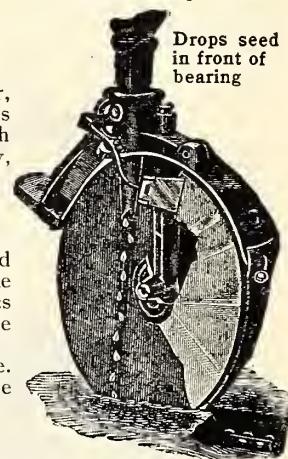
Double Disc Drills

10 double discs, 7 inches apart.....	\$175 00
11 double discs, 7 inches apart.....	184 00
12 double discs, 7 inches apart.....	194 00

Hoe Drills

10 x 7 Spring Hoe	\$156 00
11 x 7 Spring Hoe	163 00
12 x 7 Spring Hoe	172 00

Prices on other styles and sizes quoted on request. Before you buy a grain drill ask for special catalogue giving full details, testimonials and guarantee.



Drops seed
in front of
bearing

Moline No. 22 Corn Planter

The Moline No. 22 Corn Planter will increase the yield because it is unflinching, accurate, and dependable.

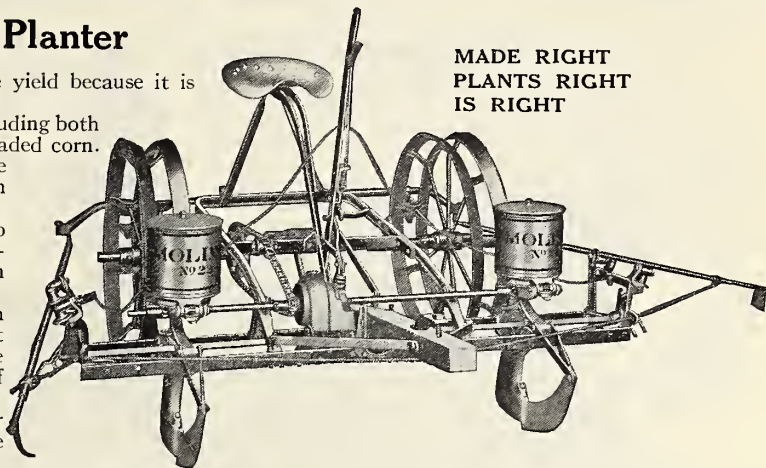
A very popular feature is the regular equipment, including both edge drop and round hole plates for graded and ungraded corn. In addition to the regular plates, special plates can be furnished for planting a wide variety of seed—from onions to lima beans.

The variable drop mechanism may be changed to plant two, three, or four kernels in a hill without stopping the team. The drill drop is easily changed from check to drill without leaving the seat.

The automatic marker needs no attention when turning at the end of the field. Tip-over hoppers permit a change in plates without removing the seed. The perpendicular walls of the hopper and cone shape of plates insure positive feed and planting accuracy.

The wheels are 30 inches in diameter with either solid concave or split tires. Row spacing is adjustable from 3 feet 4 inches to 3 feet 10 inches.

MADE RIGHT
PLANTS RIGHT
IS RIGHT



PRICES

No. 22 Planter without Fertilizer Attachment.....	\$64 00	Check-rower attachment with reel and 80 rods wire, extra..	\$12 00
No. 22 Planter with Fertilizer Attachment.....	88 00	Double-trees and Neck-yoke extra.....	3 00

Automatic Hill Drop Attachment included in above prices

Moline-Hooper Corn Planter One Row One Horse

STURDY—SIMPLE—ACCURATE

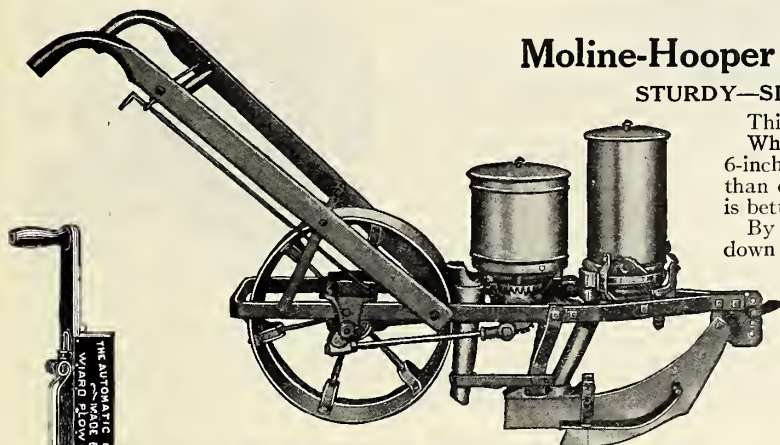
This is the "very last word" in one-horse Planter construction. Wheels—Open, with removable bands, 20-inches high with 6-inch face, giving a good traction and wider covering space than others. (Band can be removed, as at times open wheel is better—can use either way.)

By a special "divider" arrangement, the fertilizer is put down some deeper than the seed. A small amount of soil will cover the fertilizer.

Lever—Convenient at hand for putting in and "out" of gear. When planter is thrown out of gear all the working parts are disengaged, eliminating unnecessary wear on gears and seeding mechanism.

Sight Feed—Seeds are visible from time they leave the hopper until deposited in the ground. Operator can at all times see the amount of seed he is putting out.

Equipment includes both Edge Drop and Round Hole Plates



Without Fertilizer Attachment, \$21.50; with Fertilizer Attachment, \$27.00

The Wiard Corn Planter SIMPLE—DURABLE ECONOMICAL

In this Planter the seed is delivered from the dropper to the receptacle at the bottom, which, when opened by pressing over on the foot, leaves it at once at the depth required, avoiding the trouble found with all hand planters that deliver the seed direct from the dropper to the soil. Price \$3.00, postpaid \$3.25.

The Eclipse All-Steel Rotary Hand Corn Planter

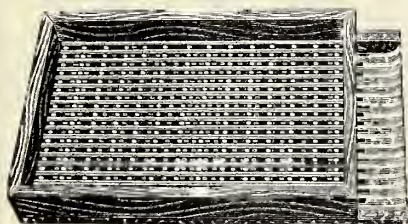
Has a positive feed and four plates for planting one, two, or three grains at a time, and an extra plate for smaller seeds. Price \$2.25, postpaid \$2.50.

Perfection Corn-Grader

A seed Corn-Grader has become a necessity in getting a uniform stand of corn. No planter will drop uniformly unless the seed is graded. Graded seed insures perfect dropping, stronger plants and increases the yield 5 to 15 bushels per acre.

There are four grades of corn on every ear. (1) The small kernels; (2) the large, odd-shaped kernels; (3) the broad kernels too thin for good seed; (4) the even-sized perfect kernels.

This Grader sorts them out in one simple operation. It has a special lower screen construction by which it gets four grades of corn. It has a guard on the lower screen to prevent the spilling of the corn while grading, and to enable all of the screen to act on the corn at once, thus making rapid work.



Capacity: 6 to 10 bushels per hour.
Size 12 x 19 inches
Price, \$1.25, postpaid, \$1.40



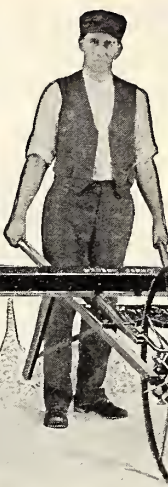
Eclipse Planter

Wiard Planter

Thompson's Royal

14 Feet Long

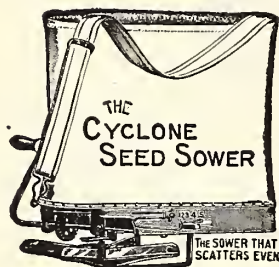
This Grass Seeder has won for itself first place among all kinds of Grass Seeders. Most accurate and economical machine for sowing clover, timothy, alfalfa, and other small seeds broadcast. Runs easily, and sows evenly in windy weather. The quantity of seed sown is accurately governed by the wheel, which moves correspondingly slow or fast as the machine is run over the ground. It is

**Chain Feed Grass Seeder**

32-inch Wheel

instantly thrown out of gear, and the amount of seed sown is quickly governed by changing the pin in the index plate as thereon indicated. Does not injure or bunch the seed, but evenly distributes it the full length of the hopper.

Sows all small seeds like Clover, Timothy, and Alfalfa. Price \$10.50.

**"The Cahoon" Seeder**

The most accurate and durable Hand Broadcast Seed Sower. Sows all kinds of grain and grass seed. Is accepted everywhere as the world's standard. It is made of steel, iron and brass and lasts a lifetime. Every machine warranted. \$5; postpaid \$5.50.

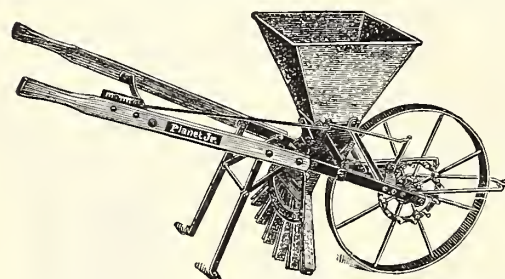
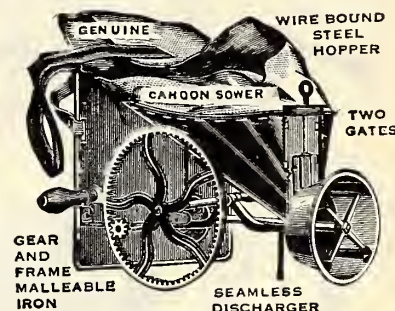
The Cyclone Seed Sower

Has won for itself first place among all kinds of hand seed-sowers. It has proven in thousands of instances that it is the most accurate, most convenient to operate and most economical machine for sowing clover, timothy, alfalfa, and all other farm seeds that can be sown broadcast. It runs easily and will

distribute any desired quantity of seed per acre.

A Slope Feed-Board. All working parts are attached to a rigidly built frame made from thoroughly kiln-dried lumber and, embodied in the framework is a Slope Feed-Board which gives the seed a gravity flow and always keeps the hopper outlet properly filled without tilting the machine.

Automatic Feed Adjustment. Gives a positive force feed. Is quickly adjusted for different seeds. Flow can be started or stopped instantly by the touch of a lever. Seed cannot clog or "rush." No waste of seed. \$2.10; postpaid \$2.25.

**Planet Jr. No. 220 Fertilizer Distributor****SAVES TIME, MONEY—PRODUCES BIGGER CROPS**

The No. 220 spreads fertilizer from 4 to 30 inches on the ground. The hopper capacity is one bushel and the weight of the load is placed over the wheel, making it easy to push. The No. 220 will distribute 100 to 2,000 pounds of commercial fertilizer to the acre.

The No. 220 will distribute fertilizer in the middles of three rows 12 to 14 inches apart; it will side-dress one side each of two rows up to 3 feet apart (one complete row; and corn in wider rows). You can use it in very narrow rows—as close as 9 inches. You can use it in 3½ to 4-foot rows by closing off the flow in three spouts and distributing through the

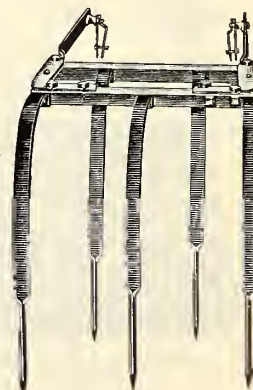
other three—either on the right or left hand side. Price, \$27.

Center Weeder Attachment**FOR ALL RIDING CULTIVATORS**

This Center Weeder Attachment for Cultivators works directly over the row, the small teeth loosening the ground directly around and among the small plants, going where the Cultivator cannot reach.

This Attachment is furnished with either 5 or 7 teeth. It can readily be attached to any iron-beam cultivator by use of our New Universal Clamps, with an ordinary cultivator wrench.

Prices: 5-tooth Attachment Complete \$3.75; 7-tooth Attachment Complete \$4.25. By parcel post, 25 cts. extra.



GARDEN SEEDS. We have been supplying the most critical market-gardeners for more than forty years with vegetable seeds. Whether you buy in packets or in pounds, pints or bushels, you get the same fresh stock we furnish the largest market-gardeners. No order is too small to merit our best attention. Our stock is fresh from the most reliable growers of Europe and America.

IRON AGE POTATO MACHINERY

Convertible Two-Man Planter With McWhorter Fertilizer Distributor

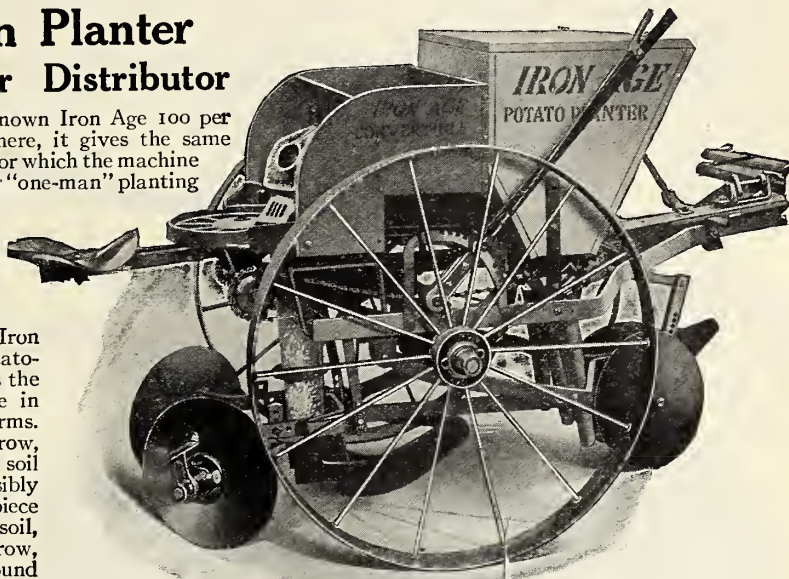
The No. 404R is the latest model of the well-known Iron Age 100 per cent Potato Planter. In this new form, shown here, it gives the same "personally inspected planting of every seed-piece" for which the machine has always been noted, but if desired, an automatic or "one-man" planting attachment can be supplied. This Planter is furnished either with the shield opening plow, or the double disc opening plow, as shown in cut, which is recommended for western Pennsylvania territory. The McWhorter Belt Feed Fertilizer Distributor has also been made standard equipment.

Two very important features have made the Iron Age the favorite Planter among scientific potato-growers for many years. One of these features is the perfect planting of **one and only one** seed-piece in every hill; the other is the groundwork it performs. With wonderful precision this planter opens the furrow, sows and **thoroughly mixes** the fertilizer with the soil on each side of the seed-trench where it cannot possibly come in contact with the potato, places the seed-piece in a narrow groove made in the moist, fresh soil, covers it to any desired depth, and marks next row, all at one operation. Every piece is placed in the ground at proper space, 12, 14, 15½, 17, 18½, or 20 inches apart as desired. The depth of planting and the covering is absolutely uniform. The planting is in a straight line because the seed is placed in a narrow groove—easy to cultivate, spray, and dig.

The McWhorter Fertilizer Distributor used on this machine feeds the fertilizer into the tubes by means of a Force-Feed Belt. This belt carries the fertilizer in a broad, thin sheet under an adjustable gate which regulates the quantity. The feed cannot become clogged because the belt is a revolving bottom for the hopper, too wide to permit damp fertilizer bridging over it. Each spout is movable and can be adjusted to any desirable position. The quantity of fertilizer used can be adjusted from approximately 500 to 3,000 pounds to the acre. Capacity of hopper about 200 pounds.

A single lever, operated from the seat, throws the entire machine into operation, lowering the opening discs, the grooving shoe, and the rear covering discs; also starts sowing of the fertilizer and the dropping of the potatoes.

Special catalogue and prices on request



Iron Age Wide Elevator Potato Digger

Built for the heaviest conditions of vines, grass, and soil. Stands the hardest kind of usage for years. Separates the potatoes thoroughly from the soil, leaving them in a narrow trench midway between the wheels, with the vines cast off to one side.

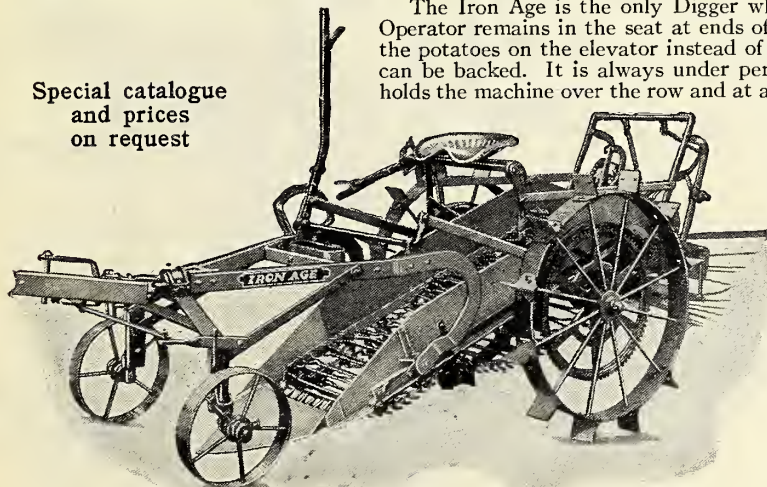
The Iron Age is the only Digger which can be thrown in and out of gear from the seat. Operator remains in the seat at ends of rows and by throwing the machine out of gear keeps the potatoes on the elevator instead of scattering them broadcast when turning. This digger can be backed. It is always under perfect control because of the Iron Age foretruck which holds the machine over the row and at an even depth but does not permit swinging to one side.

This foretruck permits very short turning anywhere without danger of upsetting or straining. Level ground, small ditches, grass hummocks at edge of field, trees which have to be worked around, side hills, all are taken care of by means of it. The plow is made of 1½-inch steel and is fitted with stone fingers to prevent clogging. The elevator is 22 inches wide and can be furnished in either the 6-foot or 7-foot sizes. The wheels are 36 inches in diameter. Separate, removable bearings carry the elevator apron. Steel kickers with spring trip keep the vines and grass moving. A Vine Separator is furnished as a part of each machine.

Hyatt Roller Bearings can be furnished on the main elevator and shaker shafts when desired.

Iron Age Diggers are made in several styles, either with engine or traction power. They are built by specialists in potato machinery who have been in business for more than eighty years.

Special catalogue
and prices
on request

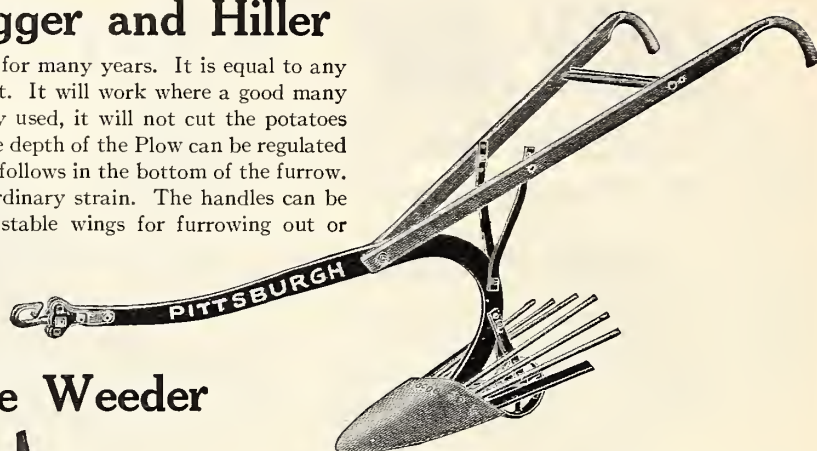


Pittsburgh Potato-Digger and Hiller

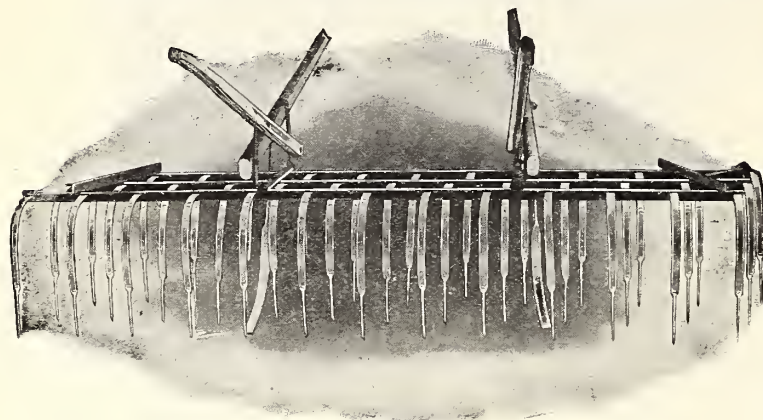
This Potato-Digger has been in successful use for many years. It is equal to any ordinary requirements that may be made upon it. It will work where a good many higher-priced Diggers will not work. If properly used, it will not cut the potatoes and will also leave the ground in good shape. The depth of the Plow can be regulated with a gauge wheel bolted on the rear and which follows in the bottom of the furrow. The beam is made heavy enough to stand all ordinary strain. The handles can be adjusted up or down. Hilling shovel has adjustable wings for furrowing out or hilling, as may be desired.

PRICES

Digger only.....\$11 00
Digger and Hiller combined..... 13 50



Hallock One Horse Weeder



FLAT TEETH—ROUND POINTS—SEVEN AND ONE-HALF FEET WIDE

This Walking Weeder is equipped with 39 flat teeth, 1 inch wide, with round points. Every tooth is guaranteed.

The frame or head of Weeder is angle steel, to which the teeth are bolted. Teeth can be removed from any part of the frame, as may be desired to work only between rows. The thills and handles are adjustable to various heights of horse or man.

Equipped with runners for transporting to and from the field.

Price, \$13

Moline B Riding Cultivator

This wheel-guide beam-shift Cultivator gets the weeds that are close to the rows. It is adapted for cultivating any kind of row crop and is a handy, easily operated Cultivator under any conditions. Convenient levers give quick adjustments.

One lever raises both beams at the same time and balances the frame. Uniform depth of gang is regulated by independent levers. Center lever spaces the beam to any position.

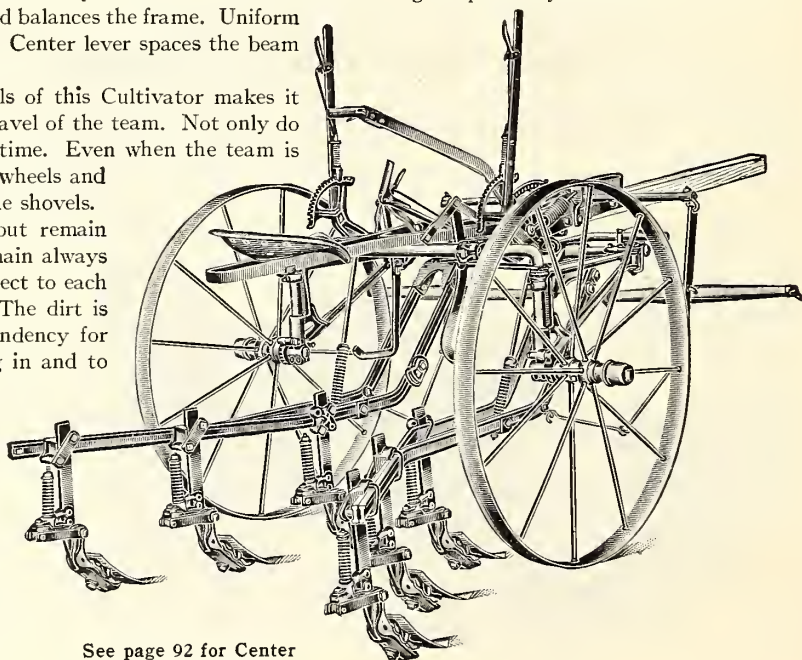
The double action produced by the foot-pedals of this Cultivator makes it possible to dodge instantly far out of the line of travel of the team. Not only do the gangs shift but the wheels pivot at the same time. Even when the team is walking far to the side it is possible to guide the wheels and shift the gangs to follow the row perfectly with the shovels.

The beams do not pivot at the front end but remain parallel as they are shifted. The shovels thus remain always at the same angle and in the same line with respect to each other. A uniform job of cultivating is assured. The dirt is thrown always in the same way. There is no tendency for the shovels to track when the gangs are swinging in and to cultivate far apart when gangs are swung out.

The wheels are 40 inches high, with concave tire and dust-proof boxes. They may be adjusted for width of rows from 36 to 44 inches.

Furnished with pole, neck-yoke, evener, and solid shields.

6-Shovel, Pin Break.....\$56 25
8-Shovel, Pin Break..... 58 25
6-Shovel, Spring Trip..... 61 00
8-Shovel, Spring Trip..... 63 50
Hillers per pair. Extra..... 2 50



See page 92 for Center Weeder Attachment

Little John Riding Cultivator

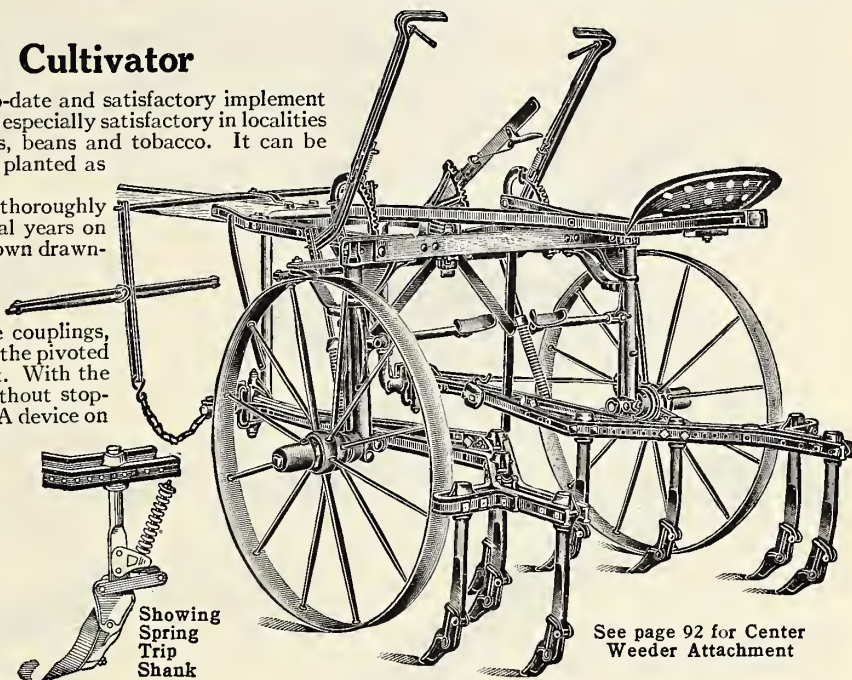
The Little John Cultivator is the most up-to-date and satisfactory implement of its class on the market today. It will be found especially satisfactory in localities where narrow row crops are planted—potatoes, beans and tobacco. It can be narrowed down to cultivate successfully crops planted as close together as 28 inches.

We have incorporated in the Little John the thoroughly tested pivot axle construction, in use for several years on our Pivot Axle Cultivators. We use the well-known drawn-in hitch feature, whereby the draft of the team draws the gangs into the ground, assuring an even depth of cultivation.

The gangs are pivoted to the front on cone couplings, and are controlled by the shifter bar attached to the pivoted standards and are governed entirely by the feet. With the center lever the operator can instantly and without stopping bring the gangs together or set them out. A device on the shifter bar enables the operator to lock the frame, making it rigid. The pole is equipped with the patent pole adjustment whereby the frame of the Cultivator is kept level, regardless of the size of the team. The extension gangs are made of two bars of high carbon steel, the shovel standards are attached between the bars and the holes therein make it possible to set them as close together as may be desired.

The wheels are low and very strong, equipped with dust-proof hubs.

6-Shovel, Pin Trip.....	\$51 50
8-Shovel, Pin Trip.....	52 50
6-Shovel, Spring Trip.....	56 50
8-Shovel, Spring Trip.....	59 50



Showing
Spring
Trip
Shank

See page 92 for Center
Weeder Attachment

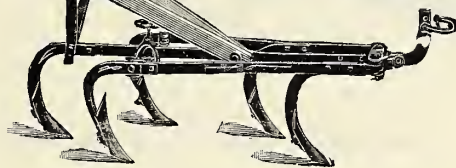
Six-shovel Cultivators are furnished with six $3\frac{1}{2}$ -inch double-pointed shovels, and two $1\frac{1}{2}$ -inch Bull Tongues. Eight-shovel Cultivators with eight $2\frac{1}{2}$ -inch shovels, but no bull tongues. Prices include shields. Hillers, if wanted, are \$1.75 extra.

Pittsburgh Cultivators

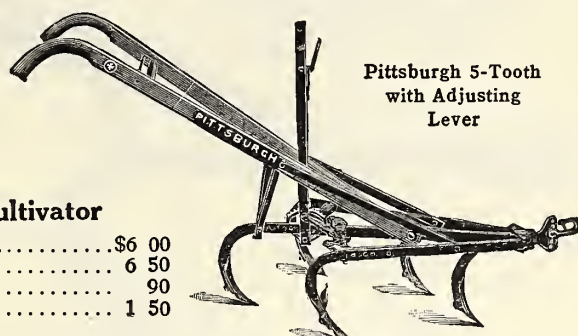
The Pittsburgh Cultivators are made of round-edge steel, and are highly finished. The outside stay braces hold the frame solid to any width it may be set.

Extra care is taken in the "setting" of the shovels to see that they "face" the work properly, have correct "pitch" and are evenly spaced so that they will cut all the ground.

Pittsburgh 5-Tooth
with Hand-Wheel
Adjustment



Pittsburgh 5-Tooth
with Adjusting
Lever



Pittsburgh 5-Tooth Cultivator

With Hand-Wheel Adjustment.....	\$6 00
With Adjusting Lever.....	6 50
Wheel Extra.....	90
Horse Hoes Extra.....	1 50

Pittsburgh 7-Tooth
Cultivator



Pittsburgh 7-Tooth Cultivator

By the use of this Cultivator the ground is more thoroughly cultivated and the surface is left smooth and level.

With Hand-Wheel Adjustment.....	\$7 00
With Adjusting Lever.....	7 50
Wheel Extra.....	90
Horse Hoes Extra.....	1 50



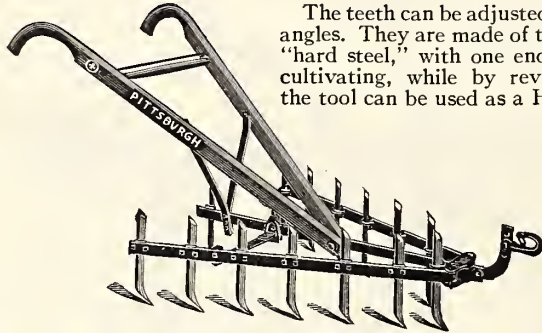
Wheel for
Pittsburgh
Cultivators



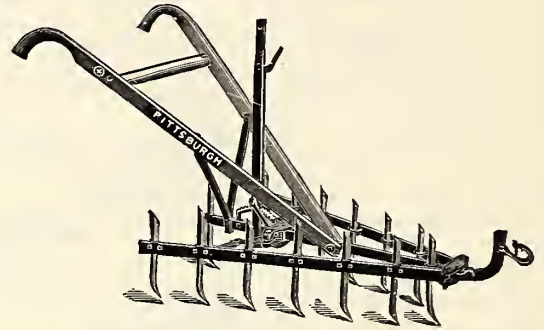
Horse Hoes for 5- and 7-Tooth Cultivators

Pittsburgh 14-Tooth Cultivators

The teeth can be adjusted to different angles. They are made of the very best "hard steel," with one end shaped for cultivating, while by reversing them the tool can be used as a Harrow.



With Hand-Wheel for Adjusting Width of Frame. Price, \$6.25

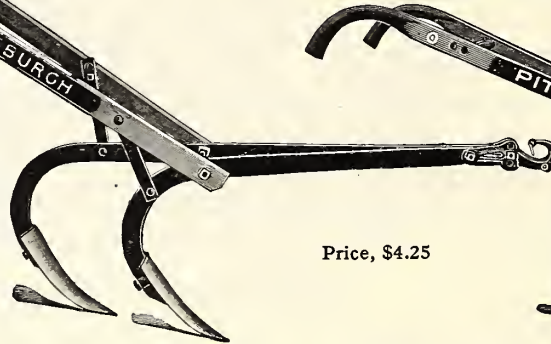


With Lever for Adjusting Width of Frame. Price, \$6.75

PITTSBURGH SHOVEL PLOWS

Pittsburgh Steel-Beam Double-Shovel Plow

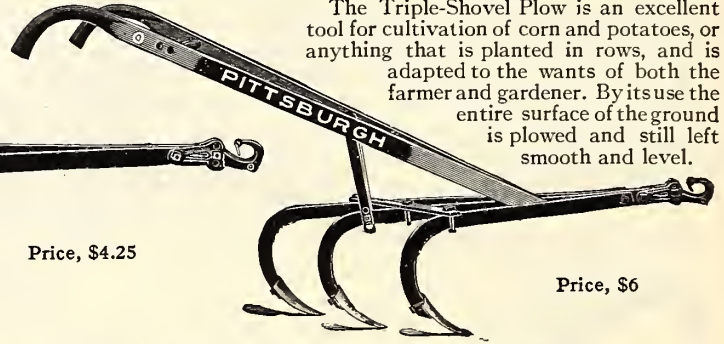
Shovels have proper pitch for entering ground right, and making steady running Plow. Beams made of solid steel rolled, tapering at point.



Price, \$4.25

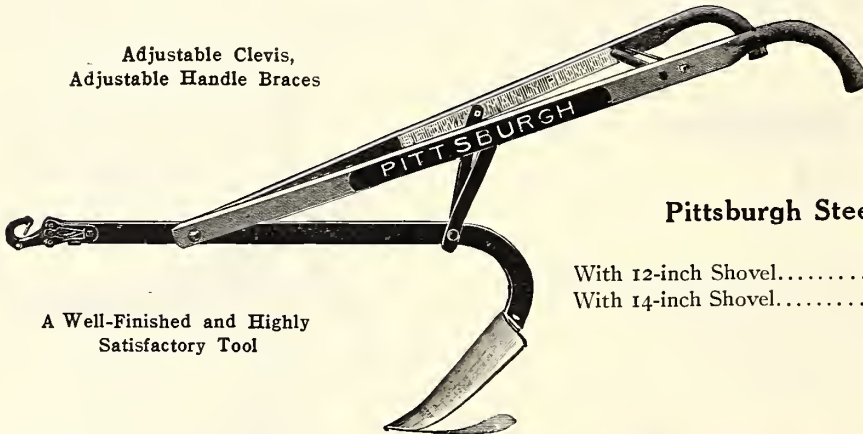
Pittsburgh Steel-Beam Triple-Shovel Plow

The Triple-Shovel Plow is an excellent tool for cultivation of corn and potatoes, or anything that is planted in rows, and is adapted to the wants of both the farmer and gardener. By its use the entire surface of the ground is plowed and still left smooth and level.



Price, \$6

Adjustable Clevis,
Adjustable Handle Braces

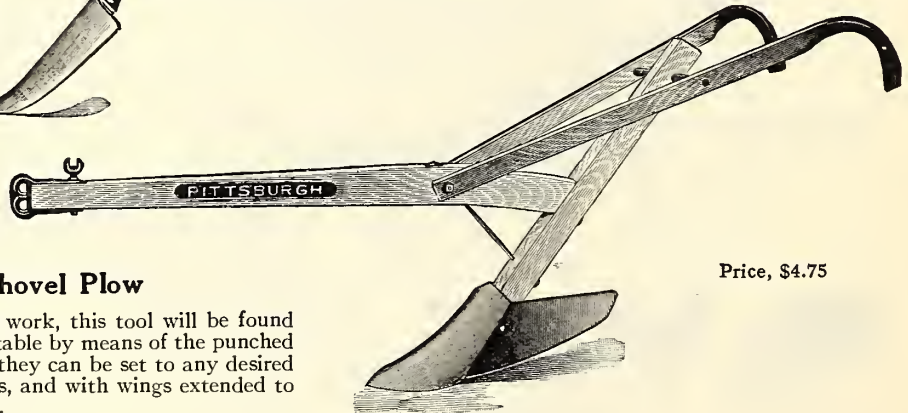


A Well-Finished and Highly
Satisfactory Tool

Pittsburgh Steel-Beam Single Shovel Plow

PRICES

With 12-inch Shovel.....	\$3 75
With 14-inch Shovel.....	4 00



Price, \$4.75

Pittsburgh Wing Shovel Plow

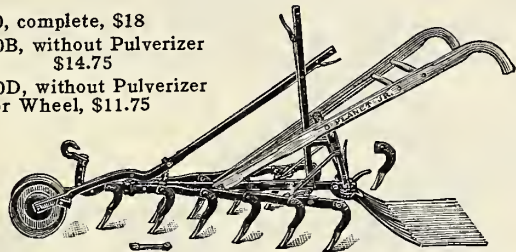
For hilling potatoes and other similar work, this tool will be found highly satisfactory. The wings are adjustable by means of the punched straps or braces that support them, and they can be set to any desired angle. Width of main shovel is 12 inches, and with wings extended to limit, it makes a total width of 26 inches.

Planet Jr. Farm and Garden Tools

Planet Jr. Tools are the greatest savers of time, labor, and money ever invented for the farm and garden. They pay for themselves in a single season in bigger and better crops, and last a lifetime. Fully guaranteed.

Planet Jr. Twelve-Tooth Harrow, Cultivator and Pulverizer

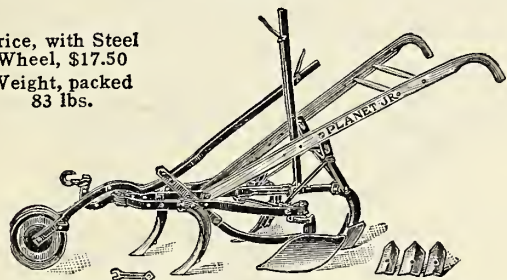
No. 90, complete, \$18
No. 90B, without Pulverizer \$14.75
No. 90D, without Pulverizer or Wheel, \$11.75



With the Twelve-tooth Harrow you go as deep or shallow as you like, come up close to row without injuring plants, cut out all weeds, stir the soil and fine it as with a garden rake. You widen and narrow as you please between 12 and 32 inches. A favorite with strawberry-growers, market-gardeners, etc.

No. 8 Planet Jr. Combined Horse Hoe and Cultivator

Price, with Steel Wheel, \$17.50
Weight, packed 83 lbs.

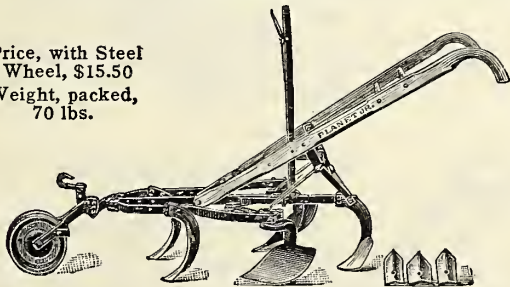


No other cultivating machine is so widely known as the Planet Jr. Combined Horse Hoe and Cultivator, for it is in use throughout the civilized world. It is so strongly built as to withstand incredible strain, yet it is light and easy to handle. Fifteen other styles of Planet Jr. Cultivators—various prices. Come and get a Planet Jr.; save time and money.

We have other styles of one-horse Cultivators at various prices. Fully guaranteed. Let us show you all our Planet Jrs.

No. 9 Planet Jr. Combined Horse Hoe and Cultivator

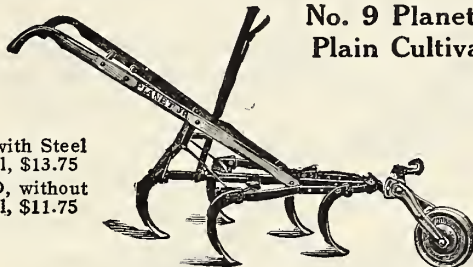
Price, with Steel Wheel, \$15.50
Weight, packed, 70 lbs.



This Horse Hoe is identical with No. 8, except that it has no depth regulator and a plain wheel instead of lever wheel. It has the high frame, patented hollow steel standards, steel wheel, patent lever expander, and hollow steel wheel arms.

No. 9 Planet Jr. Plain Cultivator

Price, with Steel Wheel, \$13.75
No. 9D, without Wheel, \$11.75



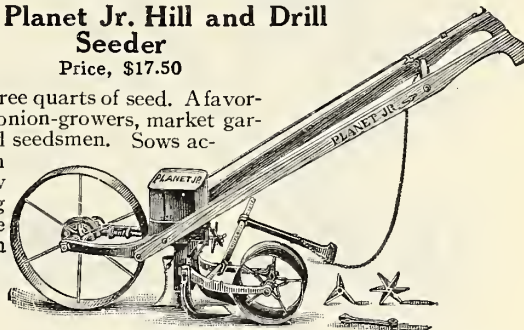
The No. 9 Plain Cultivator is a sturdy and carefully constructed tool, with features that will appeal to most farmers. It has become popular because of its strength, lightness, easy change of width, and perfection of work. Its handles are adjustable in height and also sideways, and the equipment of Cultivator steels is especially hardened. Note the fact that the teeth are beveled which keeps them sharp and adds 50 per cent to the wear. The tool has a steel wheel, and is equipped with hollow steel standards and steel draft hook.

This tool is so strongly built as to withstand incredible strain, yet it is easy to handle. Simple and practical in every way, and will appeal to any farmer who desires to save time and labor, and buy a tool that will last for a great many years.

No. 3 Planet Jr. Hill and Drill Seeder

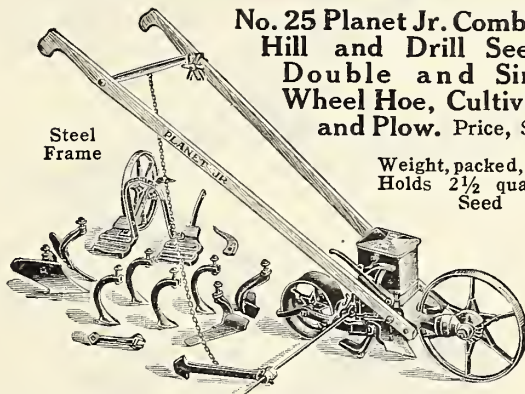
Price, \$17.50

Holds three quarts of seed. A favorite among onion-growers, market gardeners, and seedsmen. Sows accurately in a narrow line making wheel-hoe cultivation easy.



No. 25 Planet Jr. Combined Hill and Drill Seeder, Double and Single-Wheel Hoe, Cultivator, and Plow. Price, \$21.50

Weight, packed, 61lbs.
Holds 2½ quarts of Seed



As a Seeder it is practically the same as the Planet Jr. No. 4, and as a Wheel Hoe it has the same steel frames and cultivating attachments as the Planet Jr. No. 12 Double-Wheel Hoe.

Two acres a day can easily be worked, and when it is done it will be a better job than several men could have done in the same time with hand hoes.

Planet Jr. Farm and Garden Tools

Cut down work and boost your crops. Old-time farming and gardening no longer pays. These scientific tools do the work of three to six men, give bigger yield, and save their cost in a single season. Invented and made by a practical farmer and manufacturer, with half a century's experience. Planet Jrs. are strong and lasting. Every tool fully guaranteed. Come and let us convince you of their economy.



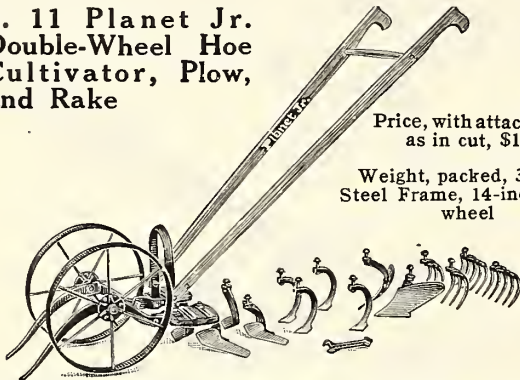
No. 4 Planet Jr. Combined Hill and Drill Seeder, Wheel Hoe, Cultivator, and Plow

Price, complete, \$18.
Weight, 50 lbs.
As a Seeder only (No. 4D),
\$14.25
Holds $2\frac{1}{2}$ quarts of seed

Plants in hills 4, 6, 8, 12 or 24 inches apart.

Soon pays for itself in the family garden as well as in the larger acreage. Sows all garden seeds (in drills or in hills), plows, opens furrows and covers them, hoes and cultivates quickly and easily. No. 4D, Hill and Drill Seeder, same as above less the cultivating attachments, \$14.25.

No. 11 Planet Jr. Double-Wheel Hoe Cultivator, Plow, and Rake



Price, with attachments
as in cut, \$13.75

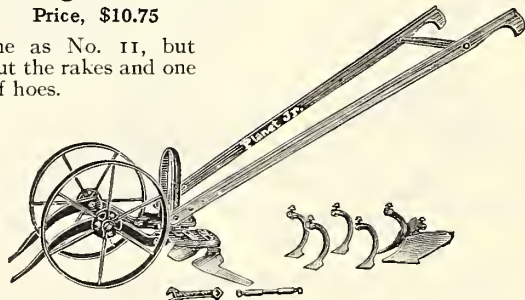
Weight, packed, 39 lbs.
Steel Frame, 14-inch steel
wheel

A Single and Double-Wheel Hoe in one. Straddles crops till 20 inches high, then works between. Has steel frames and 14-inch steel wheels. The greatest hand-cultivating tool in the world.

No. 12 Planet Jr. Double and Single-Wheel Hoe

Price, \$10.75

Same as No. 11, but without the rakes and one pair of hoes.



The attachments sold with No. 12 are what gardeners use most and the others can be added as wanted.

You can't afford to work without a Planet Jr. Come in and let us prove it to you.

WE HAVE THE PLANET JR. YOU NEED. COME AND GET IT



No. 16 Planet Jr. Single-Wheel Hoe, Cultivator, Rake, and Plow

Price, \$9
Weight, 26 lbs.
Steel Frame
15-in. Steel Wheel

Nos. 16 and 17 wheels, frames, and handles are alike, but the attachments sold with each vary.

The handles are adjustable in height. The frame is steel, convenient and strong, with quick-change device by which to exchange the tools without removing the nuts.

These wheel-hoe tools are of a special pattern, carefully tested by practical men; no others ever offered compare with them. All the steel parts are high carbon steel, oil-tempered, finely formed, finished and polished and work to a charm.



No. 17 Planet Jr. Single-Wheel Hoe

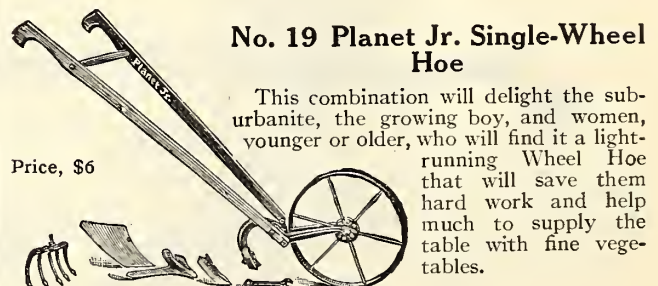
Price, \$7.75

The highest type of Single-Wheel Hoe made. Light but strong, and can be used by man, woman, or boy. Will do all the cultivating in your garden in the easiest, quickest, and best way.

No. 17½ Planet Jr. Single-Wheel Hoe

Price, \$6.75. Weight, 21 lbs.

This tool is identical with No. 16, except in equipment. The pair of 6-inch hoes, three cultivator teeth, and leaf-lifter which go with it are all the finest of their kind.



No. 19 Planet Jr. Single-Wheel Hoe

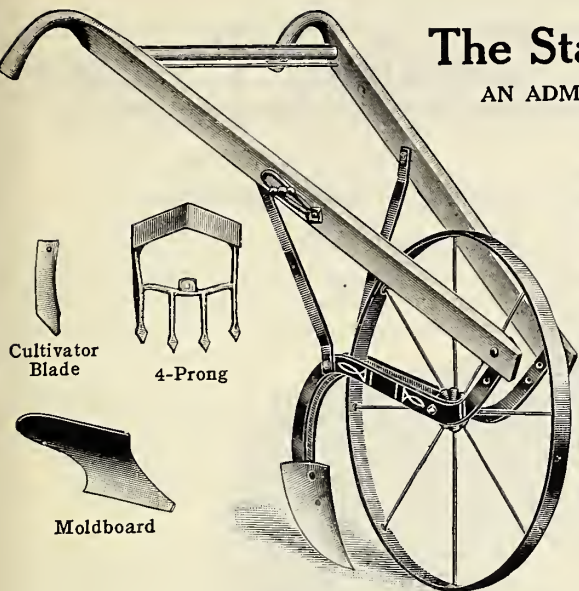
Price, \$6

This combination will delight the suburbanite, the growing boy, and women, younger or older, who will find it a light-running Wheel Hoe that will save them hard work and help much to supply the table with fine vegetables.

The Star Garden Cultivator

AN ADMIRABLE TOOL FOR THE GARDEN

This tool is a universal favorite and it is safe to say that there is no similar tool made that in the matter of ease of operation, high grade material, and fine finish will equal the Star. The Beam is made of a very stiff steel, and is constructed so that when handles are attached the center of weight falls directly over the pivoting point which forms the axle for wheel, making it self-balancing, and which admits of its being propelled with a minimum of power. Handles can be raised and lowered to suit man or boy. It is noted for its light draft and the great amount of work it will do. Built of steel throughout, except the handles, which are of selected hardwood.



This cut shows No. 1 Complete

Garden Plow can also be used on other makes of garden plows of same general type.

It's a popular attachment for the reason it brings the results the gardener wants. By means of this attachment you are able to cultivate the soil in proper manner and the weeds will have absolutely no chance to sprout. Also the proper stirring of the soil prevents evaporation of the valuable soil moisture which feeds and gives life to the growing plants. This attachment leaves the soil level and loose and will stir the same to any desired depth. The middle prong is often removed and rows straddled. No garden cultivator is complete without this attachment.

5-Prong Attachment

The New 5-Prong Attachment for Star



5-Prong Attachment



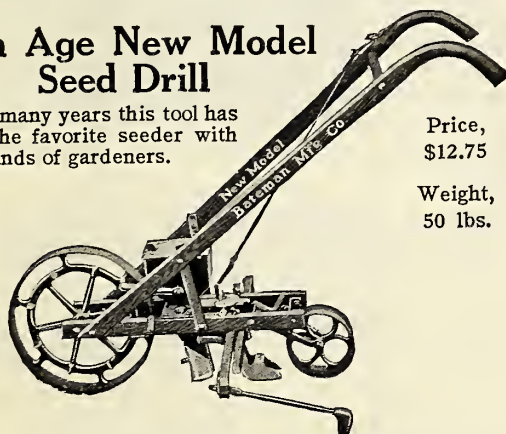
With 5-Prong Attachment

PRICES

No. 1. Complete, as shown above.....	\$3 50
No. 2. With 5-Prong Attachment, Moldboard and Cultivator Blade	4 00
5-Prong Attachment alone 90 cts., postpaid	1 00

Iron Age New Model Seed Drill

For many years this tool has been the favorite seeder with thousands of gardeners.



Price,
\$12.75

Weight,
50 lbs.

It has exact regulation of seed discharge by using an eccentric index or indicator, which adjusts the slide for the seed opening exactly where you want it.

The index is in plain sight when the tool is in operation—the names of the principal seeds are shown on it—no reference table is necessary.

The flow of seed can be instantly stopped by a swinging cut-off, operated by a cord and ring on the handles. Prevents loss at ends of rows and is preferable to a slide cut-off that is likely to be jammed by falling seed.

Gem Single Wheel Hoe and Cultivator

Price, complete with all tools
\$7.50

Weight, 28 lbs.



The working tools include set of five slender cultivator teeth, each stamped from one piece of steel and guaranteed for thorough work, especially in hard soil; two sizes of scuffle hoes for working between the rows; and pair of plows which can be used together as one plow or separate for hilling. The scuffle hoes are 4, and 8½ inches wide.

The wheels are adjusted in height by moving frame braces up or down on ratchet just in front of handles.

The handles can be adjusted to suit short or tall people.

FARM AND GARDEN BOOKS

See pages 207 and 208 for our list of the latest and best Farm, Garden, and Poultry Books.



Bolens Tractor cultivating young evergreens



Bolens Tractor with J-120 Attachment and 30-inch Timken Bearing Mower

Bolens Garden Tractor

SEEDING WEEDING

CULTIVATING LAWN MOWING

The world's leading Garden Tractor with sales exceeding all other similar machines combined. Has been bought, not borrowed, by thirty-seven leading agricultural colleges, experiment stations, and forest nurseries, including two experimental farms of the U. S. Department of Agriculture.

Bolens success is the result of patented features, each vital and indispensable for the work required. The patented arched axle, 14 inches high, provides clearance for the plants and vision for the operator. A blind man cannot cultivate, neither can the man who is unable to see his row.

Bolens Tool Control makes the guiding of the tools automatic with the steering of the tractor, so it is easy to do the most accurate work and thereby largely eliminate hand-weeding. A double clutch drive provides power turn and leaves the drive wheels free for turning or backing when power is off.

Handles are offset and the operator walks between rows in a comfortable position. The width of drive wheels over all is 18 inches (16 inches with 2-inch wheels) and the outfit will work in rows 11 inches apart or wider.

Instant hitches make all attachments quickly interchangeable without the use of a wrench.

Bolens will do light plowing in mellow garden land followed by seeding, weeding, and cultivating. All attachments are instantly interchangeable, enabling the operator to go from one job to another without loss of time. One man with the Bolens will usually do more and better work than four men with wheel-hoes. On a small farm, the Bolens often takes the place of a horse, completely motorizing all operations with a tremendous saving for the owner.

Bolens is used by gardeners, florists, nurserymen, estate owners, suburbanites, public institutions, etc.

Bolens reduces the cost of production for the commercial grower and increases the earning power of the individual.

PRICES

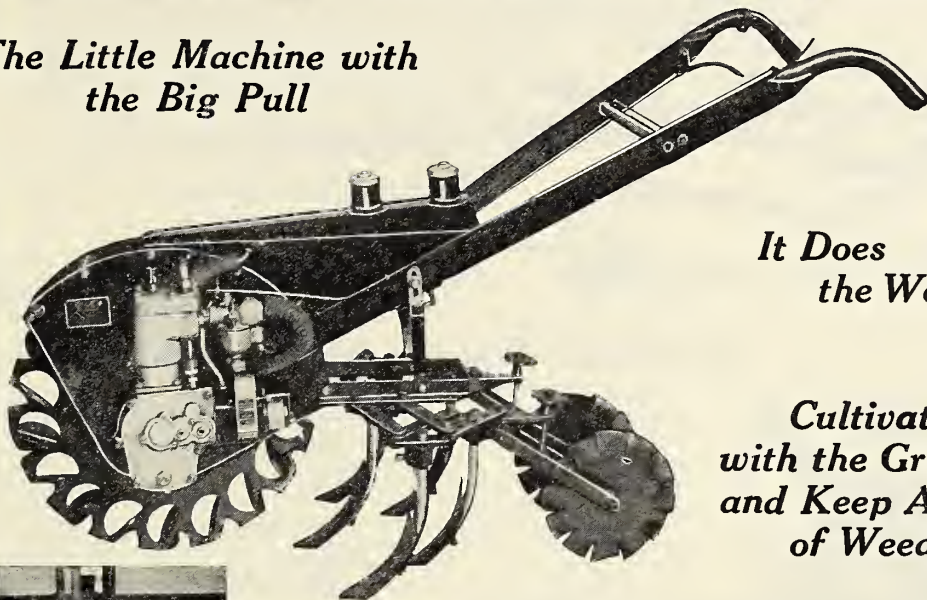
Outfit DJ-1 Bolens Tractor, with D-101 One- and Two-Row Cultivator Frame, 2 pair 6-inch Hoes and 6 Cultivator Teeth.....	\$210 00
Outfit DJ-50 with D-102 Cultivator Frame for light horse tools, five 2¼ x 8 inch Steels and five 5-inch Sweeps.....	215 00
Duckfoot Cultivator Teeth, each.....	40
6-inch Angle Hoes, per pair.....	2 00
8-inch Bolens Triangle Hoes, each.....	1 50
Bolens Spring Teeth, each.....	60
R-8 Landside Plow, 4-inch cut, each.....	1 75

U-8 Furrow Opener, each.....	\$2 75
Hilling Plows, per pair.....	1 40
7-inch Disc Hoes, per pair.....	5 50
D-172 One Row Seeder with Attachment and Marker, including Planet Jr. No. 4 Seeder Unit.....	25 00
J-120 Lawn Mower Attachment with Rims for drive-wheels less Lawn Mower.....	15 00
D-250. 22-inch Timken-bearing Lawn Mower, Tractor Type.....	50 00
D-251. 30-inch Timken-bearing Lawn Mower, Tractor Type.....	60 00

ASK FOR SPECIAL CATALOGUE AND COMPLETE PRICE-LIST

THE GRAVELY MOTOR CULTIVATOR

*The Little Machine with
the Big Pull*



*It Does
the Work*

*Cultivate
with the Gravelly
and Keep Ahead
of Weeds*



Showing ease and safety with which
Gravelly is started



Tools can be used front or rear. Quickly
and easily changed

THE GRAVELLY. Works eight hours on a gallon of gas. Works in rows from 6 inches to 3 feet wide, will go anywhere a man can walk, and will turn in a 3-foot space. Uses standard cultivating tools, while we do recommend the Planet Jr. line.

Keeps the horse out of the garden. Eliminates the push-plow. Will work in any kind of soil and on level land or hillsides. Is designed for cultivating purposes.

Is made of the highest grade material, with all gears and bearings protected by dust and dirt-proof housings.

The most popular single traction type, Garden Tractor, or Motor Cultivator that is on the market today. Don't fail to compare this wonderful little machine with others before buying. There is a difference.

A
Demonstration will
Convince
You

Ask for
Catalogue



Each machine is furnished with sufficient shanks and tool-holders to take care of any tools desired, but without cultivating tools. **PRICE \$195.00**

CULTIVATING TOOLS

No. 4183 Cultivating Teeth. Each	\$0 40
6-inch Wide-Angle Hoes. Per pair	2 00
2 1/4-inch Cultivator Blade. Each	24
Three-prong Cultivator Teeth. Per pair	2 25
U8. Furrow Opener. Each	2 75
R8. Landside Plow, 4-in. cut. Each	1 75
No. 1161. 10-inch Furrower. Each	1 20
No. 1497. 12-inch Improved Sweep. Each	95

PRICES ON OTHER TOOLS ON REQUEST

Norcross

THE POPULAR
ADJUSTABLE

HAND GARDEN CULTIVATOR

Every Garden Needs One

The Norcross Line provides, for both men and women, the most modern tools at a moderate cost. Made in three sizes, of highest quality material, attractively finished and especially well constructed. The sharp tapering prongs pulverize



the ground thoroughly from 1 to 5 inches deep and leave it level, loose, and untrampled. Works between rows or center shovel may be removed and rows straddled. It permits working the soil close up to plants without injury to roots or foliage.

5-prong, 4-ft. handle (weight 3 lbs.).....\$1 00
3-prong, 4-ft. handle (weight 2 lbs.)..... 75
Midget, 9-in. handle (weight 12 ozs.)..... 40
Midget by Parcel Post, prepaid, 45 cts.



The Barker Weeder, Mulcher and Cultivator

Should be in everyone's garden. Easy to operate. Self-adjusting. A time-saver. One man with a "Barker" can do more work, do better work than ten men with hoes. It cultivates and pulverizes the soil, forming a soil-mulch, which prevents evaporation, thus conserving the moisture, holding it in the soil for the use of the growing plants. The construction of this little machine is very simple. There is nothing to get out of order, nothing complicated about it. It has a revolving reel, holding eight spring steel blades securely fastened at the ends in cast-iron heads. Below this reel is a steel knife with ends turned up and connecting with the axle outside the heads. This lower knife passes below the surface of the ground, where it cuts off all the weed roots, while the revolving reel working in combination with it, cuts up the soil, separates the dirt from the weed roots and forms a perfect soil mulch.

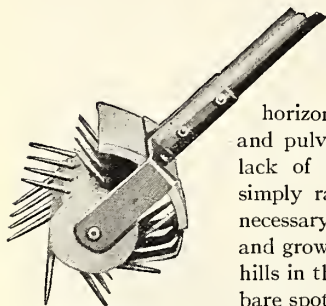
No. 8½D. The standard-size machine; will weed and mulch or cultivate a strip 8½ inches wide.....\$10 60
No. 10D. Will weed and mulch a strip 10 inches wide..... 11 75

Ask for Special Descriptive Circular



The Porcupine Cultivator

Consists of a steel-covered roller 7½ inches wide, studded with rows of steel spikes. These enter the soil vertically to a depth of about 2 inches. As the roller revolves, these spikes come up horizontally, bringing a section of the earth crust up against the stationary stripper-fingers, which crush and pulverize it thoroughly. The roots of the weed seedlings being free from earth, they quickly die from lack of moisture in the fine mulch thus formed. The spikes enter the ground in a direct line and simply raise the crust of earth, making it a surprisingly light-running tool. In one-third of the time necessary with a rake, the ground is put in the finely pulverized condition ideal for the quick germination and growth of the seedlings. A few minutes once a week afterward will keep the soil between the rows and hills in this condition. It keeps down grass around rose bushes, shrubbery, etc., and is fine for loosening up bare spots in the lawn, working in a top dressing of fertilizer, and a dozen other uses which readily suggest themselves. Price, \$4.75; postpaid \$5.



Patent Pending

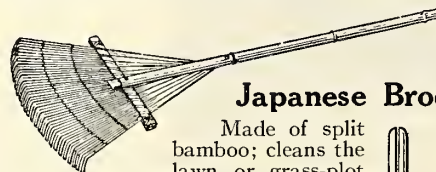
The Perfect Lawn Rake

A STRONG, WELL-FINISHED DURABLE RAKE



Reversible, and can be used for grass or leaves. The teeth are made of best quality copper-bronzed furniture spring wire, No. 9 gauge. 24 teeth; head of No. 18 gauge sheet steel. Corrugated and reinforced. Handle, 1½ inches in diameter, 5½ feet long. Head and socket nicely tinned. Price 90 cts.

Don't overlook our Nursery Department, pages 49 to 58, including Roses, Shrubs, Vines, Flowering Plants, Evergreens, Fruit and Shade Trees.

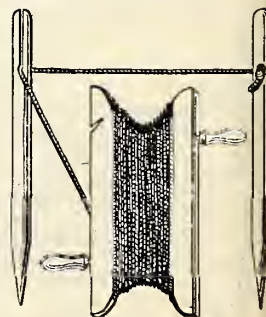


Japanese Broom Rake

Made of split bamboo; cleans the lawn or grass-plot as completely as though swept with a broom. Price, \$1.

Never-Tangle Garden Line Reel

This Reel will hold 200 feet of line. Will wind or unwind your line quickly and keep it from tangling. Will never get out of order. Will last for years. Price, with 100 feet of line, 75c., ppd.



Moe's Garden Trowel No. 80



One-piece pressed steel. Handsomely finished in black baked enamel. Length of blade, 6 inches. Ground and polished points.

Price 20 cts. each, postpaid 30 cts.

Moe's Transplanting Trowel No. 81

One-piece pressed steel. Handsomely finished in black and baked enamel. Length of blade 6 inches; width $1\frac{3}{4}$ inches. Ground and polished points. Price 20 cts. each, postpaid 30 cts.



Moe's Steel Garden Weeder No. 82



One-piece pressed steel. Handsomely finished in black baked enamel. Has five steel fingers, and is one of the most useful and handiest garden tools made. Ground and polished points. Price 20 cts., postpaid 30 cts.

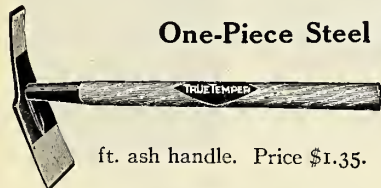
COMBINATION OFFER: Set of three tools, No. 80 Trowel, No. 81 Trowel, and No. 82 Weeder, 50 cts., postpaid 65 cts.

English Four-Tine Digging Fork



Has square tines 12 inches long, spread $7\frac{1}{2}$ inches. Tines polished front and back. Price \$2.75.

One-Piece Steel Mattock



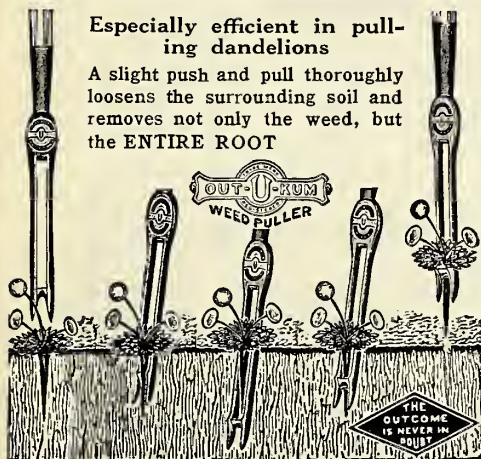
Just the tool for heavy soil. Has two oil-tempered blades. Strong and light. $4\frac{1}{2}$ -

ft. ash handle. Price \$1.35.

The Out-U-Kum Weed Puller

Especially efficient in pulling dandelions

A slight push and pull thoroughly loosens the surrounding soil and removes not only the weed, but the ENTIRE ROOT



It differs from all other Weed Pullers, most of which either cut the root or grip the weed above the ground, often breaking it off above the root. The Out-U-Kum slips down into the soil right alongside the weed, loosening the soil on that side as it goes down. It then crosses under the root, disengaging it—and is drawn up the opposite side of

the weed, loosening the earth on that side and engages the head of the weed above the ground. The now thoroughly loosened weed is easily withdrawn, root and all, with little or no clinging soil and leaving a very small hole in the lawn. Price 75 cts., postpaid 85 cts.



GARDEN AND FIELD HOES. $6\frac{1}{2}$, 7, and $7\frac{1}{2}$ -in. blades, $4\frac{1}{3}$ -ft. handle, steel socket, \$1.25.



HAZELTINE WEEDER.

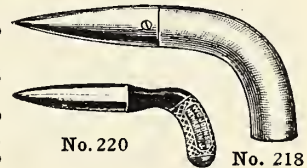
One of the best little implements ever used in a garden. Made from special high-grade steel and will last a lifetime if given

average care. Price 30 cts., postpaid 35 cts.



ASPARAGUS KNIFE, No. 2500. Used also as a weeder and dandelion digger. 40 cts., postpaid 50 cts.

- DIBBLES. 218. Wood handle, usual size.....\$0 70
219. Wood handle, small size..... 65
2180. Wood handle, brass point..... 90
220. All iron. Weight, 2lbs. 65
2200. D-handle..... 90



No. 215



No. 211

GARDEN TROWELS. 211. Forged steel. 5-in. 65 cts., 6-in. 70 cts., 7-in. 75 cts.

217. Transplanting. 6-in. 20c., 7-in. 25 cts., 8-in. 30 cts.



No. 217



No. 217-A

215. English Pattern. 6-in. 25 cts.

217-A. Transplanting Hoe. 7-in. 65c.

Postage, 10 cts. each, extra



STEEL GARDEN RAKES.

- S. 10. With 10 teeth.....\$0 90
S. 12. With 12 teeth..... 1 00
S. 14. With 14 teeth..... 1 10
S. 16. With 16 teeth..... 1 20
S. 18. With 18 teeth..... 1 30
R. 16. Road Rake, 16 teeth..... 1 60



SPADING FORKS.

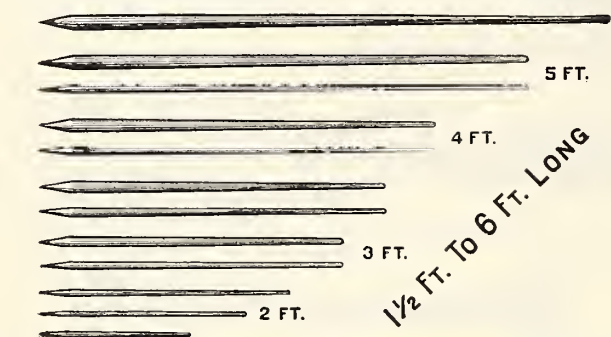
- 4-tine, wood D-handle, Diamond back..... 2 10
4-tine, malleable D-handle, Diamond back..... 1 70
4-tine, Boy's, malleable D-handle..... 1 15

SPADES.

- D-handle, solid plain back, $7\frac{1}{2}$ x 12 inches..... 1 50
Long handle, solid plain back, $7\frac{1}{2}$ x 12 inches..... 1 50

Stakes

Wooden, Round Tapering, painted green. Light Stakes are made from western white pine and the heavy from cypress.



	Doz.	100
1 1/2 ft. long, light weight.....	\$0 35	\$2 00
2 ft. long, light weight.....	50	3 50
3 ft. long, light weight.....	1 00	6 75
4 ft. long, light weight.....	1 40	9 75
3 ft. long, heavy weight.....	1 40	10 75
4 ft. long, heavy weight.....	1 75	14 25
5 ft. long, heavy weight.....	2 50	18 25
6 ft. long, heavy weight.....	3 00	22 25
Natural Bamboo. 8 ft. long.....	75	4 00

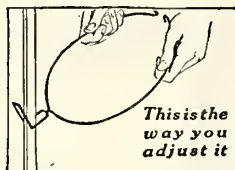
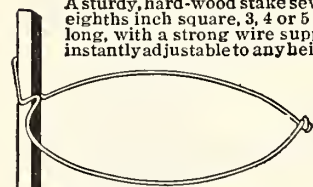
	100	1,000
Hyacinth. Painted green. 1 ft.....	\$0 35	\$2 50
1 1/2 ft.....	45	3 50

Garden or Pot Labels (Painted)

	100	500	1,000
4-in.....	\$0 45	\$1 50	\$2 50
5-in.....	50	1 75	3 00
6-in.....	60	2 15	3 75
8-in.....	1 25	4 50	8 75
3 1/2-in., copper-wired.....	60	2 00	3 50

Adjusto Plant Supports

A sturdy, hard-wood stake seven-eighths inch square, 3, 4 or 5 feet long, with a strong wire support instantly adjustable to any height.



Saves space because it keeps your plants in the air and sun, and from the ground. Enables you to cultivate close to the plant. "Adjusto" supported tomatoes ripen to perfection. "Adjusto" supports bring out the full beauty of Dahlias, Chrysanthemums and all the slender, tall-growing varieties.

	Each	Doz.
3-ft.....	\$0 30	\$3 25
4-ft.....	35	3 75
5-ft.....	40	4 25
6-ft.....	45	4 75

For Potted Plants, etc.,
Stakes 1/4 in. square, wires
4 1/4 in. diameter. 1 1/2 ft.
10 cts. each, \$1 per doz.,

\$7 per 100; 2 ft. 12 1/2 cts. each, \$1.25 per doz., \$8.75 per 100.

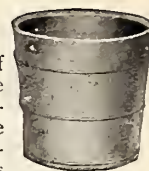
Wire Hanging Baskets

	Each	Doz.
8-in. diam.....	\$0 25	\$2 75
10-in. diam.....	30	3 25
12-in. diam.....	35	3 75
14-in. diam.....	40	4 25
16-in. diam.....	45	4 75



NATURAL GREEN MOSS, in sheets.
Bag, about 2 bushel, \$3.

Cedar Plant Tub



The Richmond Style Tree Tubs are made of seasoned, selected Virginia white cedar, are bound with electric welded wire hoops (galvanized), three hoops to each, except the No. 1 size which has two. The Richmond style fills a long-felt want for a cheap type of Plant Tub and is being used by many large florists in place of earthen pots. These Plant Tubs are nicely painted with the best oil paints—a handsome green color inside and out. The tops of the staves are slightly beveled, which gives them a neat, trim finish. Regularly furnished with no handles.

Size	Inside top diam.	Inside bot. diam.	Inside depth	Each
No. 1	6 in.	5 in.	6 in.....	\$0 65
No. 3	8 in.	6 in.	8 in.....	75
No. 5	10 in.	7 1/2 in.	9 in.....	85
No. 7	12 in.	9 in.	11 in.....	1 25
No. 9	14 in.	11 in.	13 in.....	1 90
No. 11	16 in.	12 1/2 in.	15 in.....	2 25
No. 13	18 in.	14 1/2 in.	17 in.....	3 25

If stamped steel handles are desired, add 25 cents per tub, extra

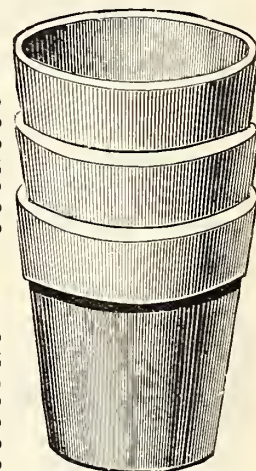
Earthen Flower Pots

Standard Pots

Inside diam.	Each	Doz.	100
4 in.....	\$0 05	\$0 50	\$3 40
5 in.....	09	90	6 00
6 in.....	14	1 50	9 00
7 in.....	20	2 25	15 25
8 in.....	30	3 00	21 50
9 in.....	50	5 00	34 00
10 in.....	70	6 50	46 00
12 in.....	1 25	12 00	

Flower Pot Saucers

Inside diam.	Each	Doz.	100
4 in.....	\$0 04	\$0 40	\$2 50
5 in.....	05	50	3 25
6 in.....	08	75	4 75
7 in.....	10	1 00	6 50
8 in.....	15	1 40	9 00
9 in.....	18	1 75	12 00
10 in.....	25	2 00	14 50
12 in.....	35	3 00	22 00



Standard Flower Pots

Azalea Pots

Inside diam.	Each	Doz.	100
6 in. x 4 3/4 in. deep.....	\$0 13	\$1 25	\$9 25
7 in. x 5 3/4 in. deep.....	25	2 10	15 00
8 in. x 6 in. deep.....	30	3 00	22 00
9 in. x 6 1/4 in. deep.....	45	4 50	33 50
10 in. x 7 in. deep.....	60	6 00	45 00

Low Pans

Inside diam.	Each	Doz.	100
5 in. x 3 1/4 in. deep.....	\$0 10	\$1 00	\$6 00
6 in. x 3 1/2 in. deep.....	13	1 25	9 25
7 in. x 3 3/4 in. deep.....	25	2 10	15 00
8 in. x 4 in. deep.....	30	3 00	22 00

Flower Pots are sent by express or freight, not prepaid

GARDEN SEEDS. We have been supplying the most critical market-gardeners for more than forty years with vegetable seeds. Whether you buy in packets or in pounds, pints or bushels, you get the same fresh stock we furnish the largest market-gardeners. No order is too small to merit our best attention. Our stock is fresh from the most reliable growers of Europe and America.



Patented Jan. 23, 1917

The small holes near each corner at the top of the box are for inserting small wires or chains for hanging the box in parlors, libraries, porches, etc. These Savo Boxes are also used extensively in cemeteries, keeping plants in constant bloom. Pour water into the tube once a week. Perfect air circulation and drainage.

Self-
Watering**SAVO**Sub-
Irrigating**All-Year-Round Plant and Flower-Box**

MADE OF HEAVY GALVANIZED STEEL

Waters the growing plants from the bottom, making longer roots and better plants, leaving top-soil mealy and loose. No surface watering.

Plants are kept healthy and fresh the year around by absorbing the exact amount of water they require from below and allowing a perfect circulation of air to pass up through the soil, causing it to be mealy and loose. Blooms will be larger and foliage heavier than in any surface watered device.

ALL-YEAR-ROUND FLOWER-BOX

Made of Armco galvanized ingot iron, which is noted for its rust-resisting qualities and will last for many years. Leak-proof and rust-proof. No transplanting—you can move Savo boxes indoors or out and have beautiful flowers and plants the year round.

For Windows, Porches, Sun-Parlors

ARTISTIC IN DESIGN AND BEAUTIFULLY FINISHED IN ALUMINUM OR DARK GREEN

Model	Height	Width	Length	Each	Postpaid		Each
A	8 in.	9½ in.	23 in.	\$3 00	\$3 20	B, Fernery, 9½ in. wide, 29 in. long, 30½ in. high; dark green finish, with stand.	\$10 00
B	8 in.	9½ in.	29 in.	4 00	4 20	E, Fernery, 30 in. high, 12 in. square, with stand.	6 00
C	8 in.	9½ in.	35 in.	4 50	4 75	G, Round Fernery, 12 in. in diameter, 28½ in. high; dark green finish, with stand.	6 00
D	8 in.	9½ in.	41 in.	5 00	5 25	H, Fernery, 36 in. high, 29 in. long, with stand.	18 00
E	8 in.	12 in.	12 in.	3 00	3 15		
F	12 in.	12 in.	12 in.	3 50	3 70		

These are outside measurements, including the ¾-inch roll rim. Special sizes made to order when required. Ask for circular

**McKim Patent All-Steel Measures**

bottoms of the half-bushel and peck sizes are corrugated, and all bottoms are made of No. 22 gauge steel sheets. Every farmer and gardener should have a full set of these measures. Per set (5 measures) \$2; postpaid \$2.25.

Made in five sizes, and we guarantee them U. S. Government Standard Capacity, or they may be returned at our expense. The sides and bottoms are made of heavy gauge steel sheets, and they are admittedly the most substantial steel measures on the market. The

"STYLE B," LOW SHAPE											
Capacity	Diam.	Depth	Each	Postpaid		Capacity	Diam.	Depth	Each	Postpaid	
1 qt.	5½ in.	3 in.	\$0 25	\$0 30		8 qts.	11 in.	5½ in.	\$0 50	\$0 65	
2 qts.	6¾ in.	3¾ in.	30	35		16 qts.	14 in.	7 in.	75	90	
4 qts.	8½ in.	4¾ in.	35	45							

Troemner's Standard Dry Tin Measures

	Each	Postpaid
½ pint	\$0 65	\$0 75
Pint	85	95

	Each	Postpaid
Quart.	\$0 95	\$1 05
2 quarts	1 25	1 35

Henry Troemner's Measures have been the accepted standard of excellence for over three-quarters of a century.

**Little Giant Self-Setting Mole Trap**

SIMPLEST—SUREST—SAFEST

It is made of all steel and heavily tinned, which makes it a very attractive as well as a durable trap. The spears are made of spring steel and are therefore smaller than those made of soft steel, piercing a mole more easily.

17 inches in height over all, 4¾ inches wide, made of 5/8-inch band steel. Price, \$1; postpaid \$1.20.

Mo-Lo

MO-LO is a preparation for helping to keep the lawn in good condition, for it exterminates the mole whose grass-root-eating habit and building of continuous runs or mounds make all lawns unsightly. It is surer and much cheaper than traps, as one package of MO-LO will do the work better than five mole-traps.

The smell of MO-LO attracts the mole, they eat it and die underground, leaving no odor.

Directions. Punch a hole in top of mound or run, drop in one MO-LO and cover lightly, do this every 8 to 10 feet. Keep MO-LO away from children and domestic animals, as it is poisonous. Pkg. 25 cts., postpaid.

Don't Overlook Our Nursery Department, pages 49 to 58, including Roses, Shrubs, Vines, Flowering Plants, Evergreens, Fruit and Shade Trees.

IRON AGE

TRACTION SPRAYERS with UNDER-LEAF NOZZLES

Four-Row Traction Sprayer with Under-Leaf Spray Bar

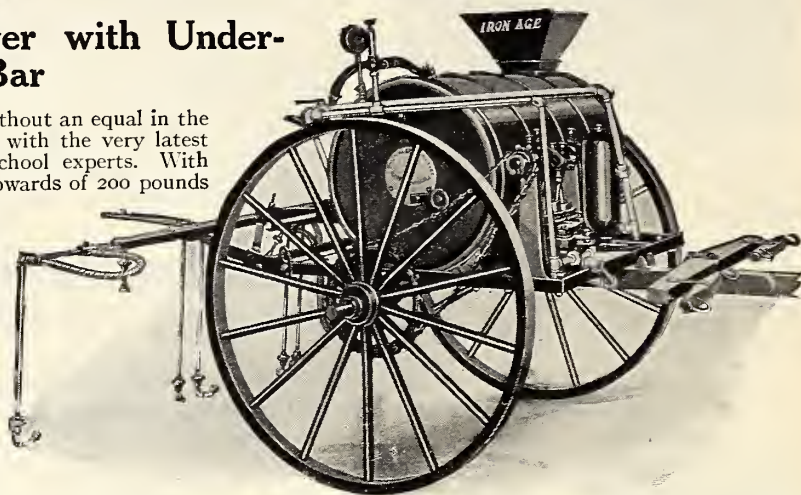
The No. 357 Iron Age Sprayer is absolutely without an equal in the Traction Sprayer field, conforming in every way with the very latest requirements of Government and agricultural school experts. With the team walking at ordinary speed it delivers upwards of 200 pounds

pressure, producing a foglike spray which completely envelops the plants when used with the drop-nozzle spray bar. This machine is equipped with the Iron Age Pressure Retainer and Pump Relief. This system locks the pressure in the pressure chamber when the spray is shut off, relieves the pump of back-pressure to make turning easy at ends of rows, and gives full pressure immediately when solution is turned on again. The 100-gallon tank is cylindrical, allowing a large revolving dasher to sweep near sides and bottom to maintain even strength of solution. The body, valve chambers, and frame of the Triplex Pump are cast together in one piece. The pistons work through stuffing-boxes, avoiding the use of leathers or rubbers which corrode and wear out. Trouble from corroding or chipping cylinder walls is also avoided. Crankshaft bearings are self-aligning. The valves are bronze balls set in removable cages. The Iron Age Triplex is a pump made especially for handling the heavy, corrosive materials used in spraying—it is not merely an ordinary pump adapted to the need.

The Nixon Drop-Nozzle Spray Bar shown here sprays four rows with twelve nozzles, four directing the spray downward on top of the plants, and the others spraying at an angle upward under the leaves. It can be adjusted in almost any way, raised, lowered, shifted to one side to offset wind-pressure. The nozzles can be turned in any direction and moved toward or from the row.

LOUIS GOUBEAUD, of Evans City, Pa., reported the results of spraying demonstration to the Farm Bureau office yesterday. Mr. Goubeaud's increase from spraying potatoes planted from 22 bushels of Irish Cobbler seed was 50 per cent, or 87½ bushels per acre. The sale of this increase paid the entire cost of his Sprayer in one year. This demonstration was the first in this section of Butler County and one of Mr. Goubeaud's neighbors has already purchased a Sprayer for next year. The sale of disease-free seed potatoes is also being greatly increased because of the results of this demonstration. (Copy of news article, November 14, 1922.)

Special catalogue and prices on request



The "Ready Rainer"

FOR SMALL GARDENS

RAIN WHEN YOU WANT IT AND WHERE

What It Does

It starts your garden earlier in the spring and keeps it producing later in the fall.

Produces bigger crops of better quality.

Makes transplanting possible at any time.

Gets your soil in condition for spading and raking, no matter how dry the weather.

Stops soil blowing, saves labor, and saves water.

To have a good garden you don't have to spend half the summer holding a dirty leaky hose.

You don't need to look at the sky and wish for rain, just turn a valve and have that shower—as much or as little as you please.

The watering is like the gentlest rain—better than most rains which nature gives you. There is no caking or packing of the ground. No injury to the flowers or foliage. It is the same watering that the big flower and truck farm owners say has revolutionized their growing.

It means an end to your greatest garden worry; absolute insurance against drought; less work and better garden.

It is a solution of your watering problem for garden, lawn and borders—a scientific irrigation line that you can move in a jiffy wherever you want it.

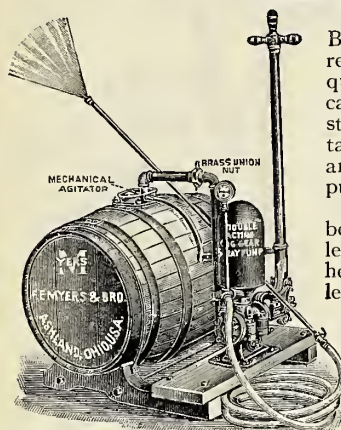
Made of ¾-inch galvanized pipe, fitted at two-foot intervals with the famous Skinner System Silver Stream Nozzles. Can be attached to your hose and at ordinary city pressure covers a strip of 50 x 18 feet.

With each line we also send a set of special nozzles, which will break the water into a very fine spray. Splendid for new or old lawns, delicate flowers or for narrow strips where the other nozzles would throw too far. The fine spray nozzles in the line cover a strip 30 feet wide—15 feet on either side.

Furnished complete, ready to erect. Made in two nine-foot sections, connected by a patented coupling which you can put together with your hands.

Three pointed iron rods support the line—push them into the ground, attach the hose and turn on the water!

Price complete, \$11.

Myers Cog Gear Spray Pump**Double Acting**

This is our most popular Barrel Spray Pump, and is recommended to those who require a Sprayer of exceptional capacity and durability. A constant high pressure can be maintained with little or no exertion, and one man can operate this pump without fatigue.

With brass valves and ground bevel brass seats, 2-inch seamless brass removable cylinder, hemp-packed plunger, double lever shut off discharge.

Special Features. Cog gear movement, increased leverage adapted for spraying under heavy pressure, mounted complete, occupying smallest possible space. Capacity sufficient for 8 nozzles. Will

set in an ordinary farm wagon box.

No. R316B, Pump complete, 50-gallon barrel mounted on skids, with pressure gauge, one 15-foot lead of $\frac{3}{8}$ -inch 7-ply discharge hose, one Fembro Fig. 1290 nozzle, one 8-foot pipe extension, with lever shut off and mechanical agitator. Price \$50.

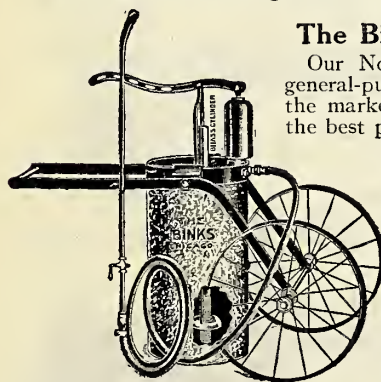
Myers Cog Gear Barrel Spray Pump

Cylinder, Valves, Valve Seats, and Discharge All Brass. 2-inch Cylinder

The construction is such that the entire Pump sets inside the barrel containing the liquid, being bolted fast at its upper end to the head of the barrel. By this arrangement the working parts are entirely submerged in the liquid that is to be sprayed, thereby avoiding all possibilities of losing priming, doing away with the necessity of a suction pipe, placing the agitator in the bottom of the liquid in a simple form, and also doing away with a large number of complicated parts. Base fits 8 x 8-inch hole. Has bronze ball valves and brass seats. The plunger is self-expanding.

No. R318B, Myers Cog Gear Barrel Spray Pump, with one lead of 15 feet of $\frac{1}{2}$ -inch 5-ply discharge hose, graduating Vermorel nozzle, and mechanical agitator, without Barrel, \$14.50.

No. R305B, for mounting on side of Barrel, \$14.50.

**The Binks No. 21 Sprayer**

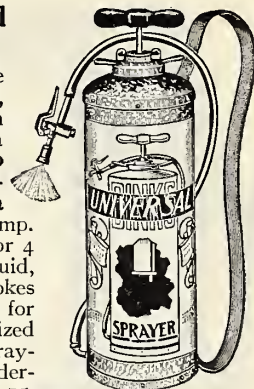
Our No. 21 machine is the latest general-purpose spraying machine on the market today. Strongly made of the best possible materials that are as light as is consistent with strength, and, owing to its portability, will suggest itself for many uses. The machine is specially adapted for use of the orchardist, dairyman, etc. The machine, being but 15 inches wide at the widest point, can pass through narrow passageways. Tank is made of galvanized steel and holds

twelve gallons of liquid. Mechanical agitator operates at each stroke of the pump and at the same time prevents sediment from clogging the strainer.

It is portable, well balanced, light and easily moved over rough or soft ground. Price with 10 feet of $\frac{1}{2}$ -inch hose and couplings, spray pipe, $\frac{1}{4}$ -inch cock, and nozzle, \$23.

The Binks No. 22 Universal Sprayer

We guarantee this Sprayer to be made of heavier metal, better material, and to operate at a higher pressure than any similar type made. It consists of a well-made galvanized steel tank, 20 inches high, 7 inches in diameter, having a capacity of four gallons, and a strong, self-contained all-brass air-pump. After the machine is filled within 3 or 4 inches from the top with spraying fluid, simply pump thirty or forty long strokes with the pump and you are ready for spraying. Furnished complete in galvanized steel with 3 feet of discharge hose, spray-nozzle and shut-off cock, with shoulder-strap for carrying. \$9.50, postpaid \$9.75.

**Auto-Spray No. 1**

The Auto-Spray No. 1 is one of the best compressed-air Sprayers made. The pump is locked air-tight to the tank by a simple sliding cam. There is no screw connection to wear out or become leaky. Every part is immediately accessible and easily replaced. Each machine is fitted with 2 feet of $\frac{1}{2}$ -inch hose, fine spray nozzle and solid-stream cap. Capacity 3 $\frac{1}{2}$ gallons.

No. 1-B, brass tank,		
with 2-ft. brass extension.....	\$9 50	Postpaid \$9 75
No. 1-D, galvanized tank with 2-ft. galvanized extension..	6 50	6 75
Brass strainer.....	1 20	1 30

Auto-Spray No. 50

Similar to Auto Spray No. 1. Capacity 2 $\frac{1}{2}$ gallons.

No. 50-B, brass tank with 18-in. brass extension...	\$7 90	Postpaid \$8 10
No. 50-D, galvanized tank with 18-in. galvanized extension.....	5 40	5 60

**The Myers Compressed Air Sprayer**

Has Cut-Off Between Hose and Tank Adjustable Long Distance Spray Nozzle

The Myers Compressed Air Sprayer is built in two sizes: 2 $\frac{1}{2}$ and 4 $\frac{1}{4}$ gallons capacity (both over-size) that meet all demands for this style of Sprayer. The Tank is made of heavy galvanized iron or brass. The side walls are double seamed, riveted, and soldered. The top and bottom are extra-heavy material with flanged edge over which the side walls are turned and thoroughly soldered. Has $\frac{1}{4}$ -inch brass tube cylinder. The nut is operated by lugs on the lower part of the handle, which engage in opening at the top of the nut. By means of the lugs on the handle the nut can be screwed tightly to the top of the tank, and at the same time lock the plunger in position, and also permits of the tank being carried by the handle when desired.

The nozzle is a special feature of this Sprayer. By means of the small lever the spray can be adjusted from a broad, fine spray into a long distance spray, throwing water 20 feet. The Valve is simple and effective. Can be removed instantly.

No. 1296. 2 $\frac{1}{2}$ -gal. Galvanized Tank.....	\$5 00	Postpaid \$5 25
No. 1296B. 2 $\frac{1}{2}$ -gal. Brass Tank.....	8 00	8 25
No. 1297. 4 $\frac{1}{4}$ -gal. Galvanized Tank.....	6 00	6 35
No. 1297B. 4 $\frac{1}{4}$ -gal. Brass Tank.....	9 50	9 85
Pipe Extension, with side outlet nozzle.....	1 00	1 10



Acme Compressed-Air Sprayer



This is truly "the acme of perfection," in Compressed-Air Sprayers. Well adapted for the farmer, stockman, fruit-grower, poultryman, and florist.

Tank, strong galvanized steel or brass, lap seamed body, heavy convex heads seamed in by special machinery, all seams well soldered and securely riveted. Diameter tank, 7 inches; height, 20 inches; capacity, 4 gallons. Tested to 60 pounds air-pressure.

Pump, seamless brass cylinder, 1 3/4 inches diameter, 14 1/2 inches long, fitted with oil-resisting rubber check valve and sealed into the top of the tank with heavy threads, absolutely preventing air escaping at this point. Bright steel plunger rod, quick-acting efficient plunger of our own special type. Pump easily removed for filling.

Nozzle, solid brass with spring of phosphor bronze, which will not corrode, absolutely non-clogging. Spray covers even all over, leaving no blank space in center as is the case with other nozzles. Each joint is absolutely water- and air-tight. Back packing gland is adjustable, which avoids taking nozzle apart in case the packing gives out. Sprayer is under perfect automatic control, and, due to its exceptional fine spray, saves time and material. Nozzle interchangeable; can be taken apart and re-assembled in a few seconds. Convenient shoulder strap attached to the tank with snaps.

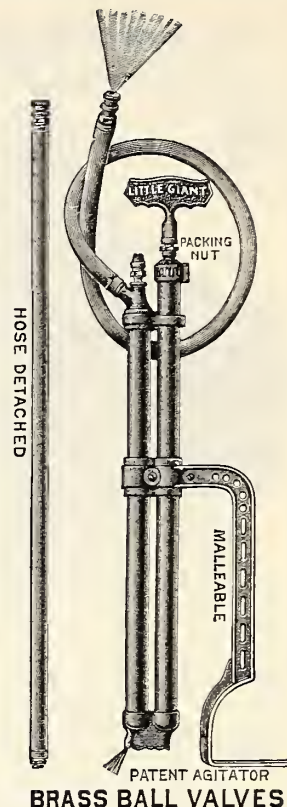
No. 345. With galvanized steel tank.....	\$6 25	\$6 50
No. 346. With brass tank.....	9 00	9 25
2-foot brass extension pipe extra.....	1 00	1 10

Little Giant Sprayer

This Spray Pump is constructed entirely of brass. It is so arranged that the labor of pumping is all done on the downward stroke of the piston and nothing on the up. The effect of this operation while pumping is to hold the pump down. The foot-rest steadies the pump, holding it in position.

It is provided with a large air-chamber, and has brass ball valves and detachable hose. The nozzle throws a continuous spray and is not affected by the movement of the plunger. Will carry a pressure on the nozzle of from 50 to 100 pounds with very ordinary exertion. For spraying, it is arranged to discharge a fine jet in the bottom of the bucket to keep the solution thoroughly mixed and agitated, a feature peculiar to this pump only, and a very necessary feature to a Spray Pump.

Little Giant Brass Spray Pump, with agitator, complete with hose and Imperial combination fine- and coarse-spray and solid-stream nozzle, with malleable foot-rest, \$4, postpaid \$4.25. Whitewash Nozzle, extra \$1.



Spraying and Whitewashing Machines

Little Wonder, Style H

A Whitewashing Machine is one of the best investments for a farmer or poultryman. The various classes of work to which the machine can be applied are almost unlimited, and it will prove astonishing the amount of work which can be performed in a day by ordinary unskilled labor, while the expense of brushes, pails, ladders, and other tools of the painter's kit are entirely dispensed with.

Our "Little Wonder" Machine is made of heavy galvanized iron with all joints well riveted and soldered, and a powerful self-contained all brass air-pump is furnished. They will be found invaluable for small classes of work, as around residences, barns, dairies, poultry-yards, greenhouses, gardens, etc., and will suggest themselves for a variety of uses other than that for which they are sold. They are provided with a bail handle and are very portable. Capacity of tank, 3 gallons of liquid.

We furnish 10 feet of 3/8-inch discharge hose, spray-cock and spray-nozzle with each machine. Price \$12.75, postpaid \$13.25.



Style H

Star, Style D

In general use by some of the largest industries of the country. Recommended for those having a considerable amount of work to do. Capacity equal to work of ten men with brushes.

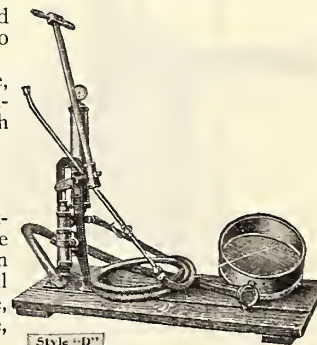
Equipment. Spray-pipe complete with 1/4-inch cock and spray-nozzle, one extra spray-tip, 200-pound pressure-gauge, special galvanized sieve, follower wrench, one length of 1-inch suction hose, and 10 feet of 1/2-inch "Star Special" discharge hose. Price \$31.50.

Star, Style J

This is a very valuable machine, being strong and well built. The working parts are made of brass and will not corrode from the use of any liquids. One man can operate this machine alone and from 70 to 80 pounds pressure can easily be carried. Machine complete, as shown in the illustration (without pail for holding liquid—anything can be used for this purpose), with spray-pipe, spray-nozzle and cock, 10 feet of our "Star Special" 3/8-inch discharge hose, \$13.75, postpaid \$14.25.



Style J



Style "D"

Circulars and Prices on larger Whitewashing and Painting Machines furnished on request

ARMSTRONG STANDARD SPRAY PUMP

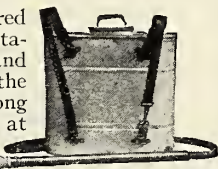
Over
250,000
in Daily
Use



The handiest spray outfit made. Use it with bucket barrel, or knapsack for spraying fruit trees, potatoes, and low-growing crops, flowers, and shrubs, for white-washing, applying hog-dip, auto-washing, etc.

For bucket use, a short length of hose is supplied. To use it with a barrel or tank for a larger orchard, a longer length of hose, up to 25 to 30 feet, is desirable. The work of spraying is always done from the ground. No ladder, long extension, or raised platform is needed. A large tree can be completely sprayed with ten or a dozen strokes of the pump. The work is done rapidly and with a minimum of labor, and, by reason of the equal strokes, spraying material is not dissipated.

For spraying young or scattered trees or truck crops, such as potatoes, tobacco, and the like, the knapsack and short curved extension are used with the Pump. With this equipment, the Armstrong Standard will spray potatoes, one row at a time, at the rate of an acre an hour or better.

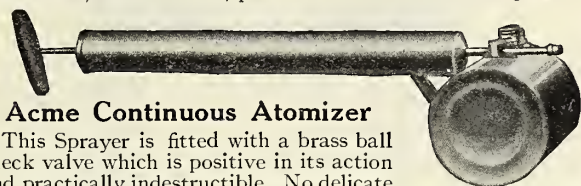


Standard Sprayer with Potato Extension and No. 3 Nozzle, Attached to Knapsack

The Standard is made entirely of brass; no leather packings; no iron casting to rust or decay; nothing to get out of order.

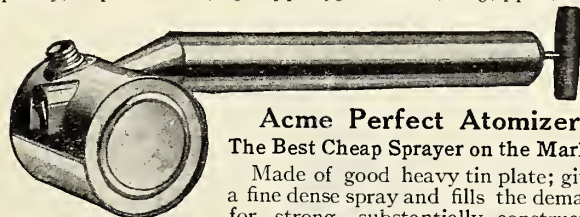
With 3 1/2-foot hose and full set of three nozzles.....	\$5 50	\$5 75
Galvanized Knapsack, capacity 5 gallons.....	4 25	4 50
Extension, 19 inches long.....	1 00	1 10
Extra hose, one-half inch, per foot.....	30	

Postpaid



Acme Continuous Atomizer

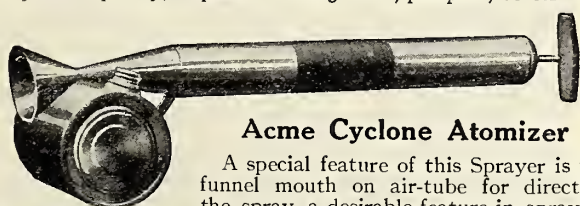
This Sprayer is fitted with a brass ball check valve which is positive in its action and practically indestructible. No delicate adjustments to maintain. Spray is produced on both in and out stroke of the plunger, doing twice the work with the same effort. Capacity, 1 quart. Tin, 85c.; ppd. 95c.; brass \$1.25; ppd. \$1.35.



Acme Perfect Atomizer The Best Cheap Sprayer on the Market

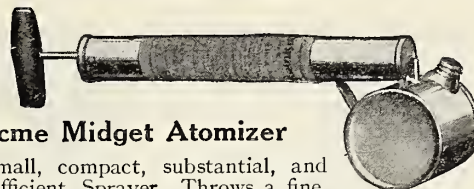
Made of good heavy tin plate; gives a fine dense spray and fills the demand for strong, substantially constructed

Sprayer. Capacity, 1 quart. Price 50 cts.; postpaid, 60 cts.



Acme Cyclone Atomizer

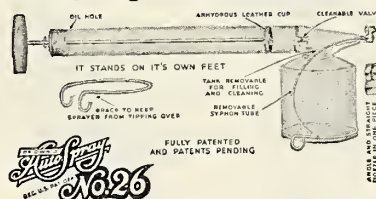
A special feature of this Sprayer is the funnel mouth on air-tube for directing the spray, a desirable feature in spraying fly-repellent on horses, cattle, etc. Made of heavy bright tin plate. Capacity, 1 quart. Price 55 cts.; postpaid, 65 cts.



Acme Midget Atomizer

A small, compact, substantial, and very efficient Sprayer. Throws a fine, dense, uniform spray, and is an indispensable aid to the florist and housewife. Made of charcoal tin plate. Capacity, 1 pint. Price 35 cts.; postpaid, 45 cts.

It Sprays Continuously



The Auto-Spray No. 26 is so designed that excessive pressure generated on the down stroke of the plunger allows this Sprayer to generate a continuous mist-like spray. The bowl can be unscrewed from the pump cylinder for refilling and cleaning. The ball valve, which prevents this stored up compressed air from returning into the pump cylinder, is conveniently located in a brass valve seat fastened stationary in the end of the pump cylinder. By removing the tank from this Sprayer the syphon tube can be easily and quickly cleaned.

This sprayer is designed for spraying garden crops, for use in greenhouses, for handling disinfectants and fly oils; in fact, it can be used with almost all spraying solutions.

Extra nozzle is supplied for spraying at an angle.

Postpaid

No. 26-C. All brass, 1 qt.....	\$1 30	\$1 40
No. 26-D. Tin Pump, 1-qt. galv. tank.....	1 00	1 10
No. 26-E. Tin Pump, 2-qt. galv. tank.....	1 45	1 55



The Robertson Compressed-Air Sprayer

The Original Compressed-Air Sprayer

It is easy to operate and does not require half the labor that it takes to work an ordinary Sprayer. It gives a continuous spray, reduces the liquid to a fine mist-like vapor and throws it with great force, so that it is driven into the smallest cracks and crevices. By means of the Universal nozzle the spray can be thrown on the under side of the leaves of plants and shrubs, the under side of beds and other furniture, into corners, behind doors, on top of mouldings, window casings, behind steam pipes, and other difficult places inaccessible with the ordinary Sprayers. Capacity one quart.

(1) Straight nozzle; (2) Universal nozzle detached; (3) Universal nozzle as attached to holder for safe keeping when not in use. To use the Universal nozzle it is substituted for the straight nozzle No. 1 on the end of the tube.

Postpaid

Galvanized. 1 quart.....	\$1 25	\$1 40
Brass. 1 quart.....	2 00	2 15
Copper. 1 quart.....	2 25	2 40

Breathing Dust and Spray Brings Sickness and Shortened Life

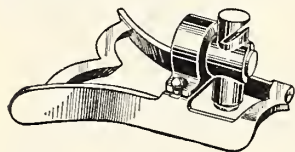
SAVE YOUR LUNGS. You will pay in health if you do not protect yourself at dusty work and spraying. Before it is too late, start now to wear a Wilson Dustite Respirator No. 2. See page 134.

The Saucer Lawn Sprinkler

The Saucer Sprinkler is simple—nothing to get out of fix—can be taken apart instantly and cleaned from top to bottom. There is nothing to wear out. Waters a circle 30 to 40 feet in diameter. We supply an additional copper cap, perforated to water only one-half of a circle. Price 75 cts., postpaid 85 cts.



The Tu-Way Lawn Sprinkler



Really two sprinklers in one, for it covers both complete and half circles. No wrench needed. Just turn the nozzle over and it

changes from full to half circle. Will not clog. Does not easily turn over. Covers 30-foot circle under ordinary pressure. The half-circle spray is fine for watering borders, etc. The very best small Sprinkler made. Fully guaranteed. Price \$1, postpaid \$1.10.

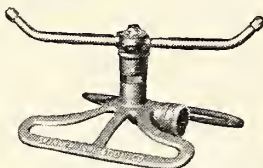
The Mor-Rain Sprinkler

As a general, all-round Sprinkler, a Sprinkler that comes nearer to meeting all requirements for the average size lawn than any other Sprinkler made, the Mor-Rain is, without question, the ideal.

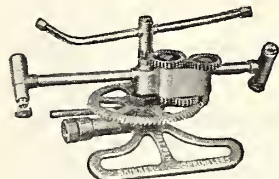
It waters both full and half circles. To change from a complete circle to a half circle, just give the nozzle head a half-turn, and the job is done.

If you have open spaces in your lawn from 50 to 100 feet in diameter, you will do well to choose Mor-Rain to do your watering.

Built to give years of service. The head and arms are made of brass. The base is of iron and weighs 3 pounds so that it cannot easily be upset. Height, 8 inches; fully guaranteed. Price, \$3.25, postpaid, \$3.50.



The Roto-Rain Sprinkler



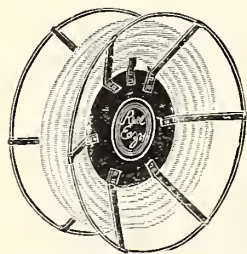
This is one of the most wonderful rotating, large-area Sprinklers that has ever been made. It will throw a fine spray covering as little as a 10-foot circle, or a full flow that will cover an 80-foot circle.

The large nozzles revolve very slowly, 70 seconds being required to complete the circuit.

In addition to the large nozzles, the inner part of the circle is taken care of by smaller nozzles on the "flyer" arms. These "flyer" arms revolve more rapidly than the large nozzles.

Of rugged construction. Hose coupling is brass swivel and so located that it is a simple matter to attach the hose. The large nozzles are made of extra-heavy brass.

Is 10 inches high and weighs 12 pounds. Recommended water pressure, 35 to 50 pounds. Price, \$15.50; postpaid \$15.75.



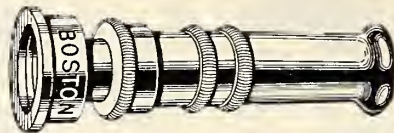
Reeleezy Hose Reel

Put the socket of a hose in the ring and roll along. The hose comes right with you. One motion. Just roll. When you get to the end of the line, pick it up, hang it up, or stand it in the corner out of the way.

Holds 75 feet of $\frac{3}{4}$ -inch, or 100 feet of $\frac{1}{2}$ -inch, garden hose. Fully loaded it doesn't take up any more room

than the hose itself. Hang it up anywhere. Self-balancing, any part is the top.

It will stand more hard knocks than it will ever get in ordinary service. Price, \$2.25; postpaid \$2.45.



Boston Spray Nozzle

Built to last. It gives the utmost satisfaction. None better made. Your garden hose line is incomplete without it. 75 cts., postpaid 80 cts.

Garden Hose



Good Luck. This $\frac{5}{8}$ -inch 6-ply Garden Hose is the biggest value on the market. Nothing approaching its quality has ever been offered at the price. This Hose is constructed similar to Bull Dog and is "built to stay alive." Here is real value for the customer who can afford only a moderate price. 25-ft. length \$3.75; 50-ft. length \$7.50; couplings included.



Bull Dog. This $\frac{5}{8}$ -inch 7-ply Garden Hose is the most famous brand on the market. It is the recognized standard and is well known as "the kind that lasts longest." Letters come to us frequently, telling of lengths in service of fourteen to fifteen years. Money cannot buy a better Garden Hose than Bull Dog. 25-ft. length \$4.50; 50-ft. length \$9; couplings included.

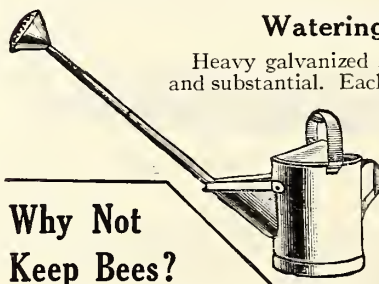


Bull Dog Spray Hose. This was thoroughly tested with numerous mixtures of blue stone, mineral oil, and arsenate solutions before being put on the market. A strictly first-class Hose for power sprayers. $\frac{1}{2}$ -inch, 7-ply, 25-ft. length \$8.75.

Tiruco Spray Hose. Made specially for spraying materials. Will stand 450 pounds working pressure. Fully guaranteed. Any desired length. $\frac{1}{2}$ -inch diameter, per ft. 30 cts.

Watering Pots

Heavy galvanized iron, reinforced; well made and substantial. Each pot has a long spout, with one fine and one coarse rose. Will outlast two or three ordinary pots.



Round Pattern.

8-quart.....	\$5 25
10-quart.....	5 50
12-quart.....	6 00

Why Not Keep Bees?

They require less room and less attention than poultry and solve their own food problems. See pages 161 and 162, and write us for large illustrated catalogue of Bee Supplies.

Breathing Dust and Spray Brings Sickness and Shortened Life

SAVE YOUR LUNGS. You will pay in health if you do not protect yourself at dusty work and spraying. Before it is too late, start now to wear a Wilson Dustite Respirator No. 2. See page 134.

The American Beauty Dust Sprayer

*"The man who has good crops to sell,
Is the man who dusts wisely and well."*

The American Beauty Dust Sprayer is a one-man machine, for orchard and field use. Carried on the back like a soldier's knapsack. It is **small** in size and in cost; **big** in action. It is easily operated, has a large, powerful bellows, and is capable of accomplishing an enormous amount of work, a veritable "little giant." In less than five minutes it is filled and brought into action; always dependable, and always available at critical times, requiring only that care which any man of common sense will give to every piece of machinery he owns.

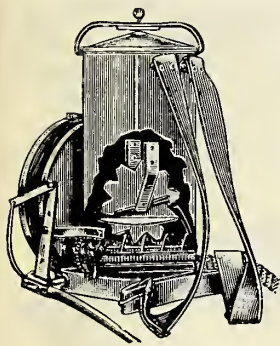
The bellows gives a strong, intermittent blast; there **when** you want it, and **where** you want it: inactive when not wanted. No waste of material. No waste of labor.

The feeding device gives an adjustable and even flow of dust into the airway, the same at beginning and end of the blast. As much as you need and no more.

This machine is so powerful that the eddying currents carry the dust to every crack and crevice. No "missed" spots, no infected leaves left to re-infect the tree or vine. It is the most powerful portable duster built. One man carrying and operating the American Beauty can dust trees up to 25 feet in height and thoroughly cover from 5 to 15 acres per day in orchard work and corresponding acreages in truck crops.

To the orchardist, it is worth many times its cost. To the market-gardener or vineyardist, its fast work will save many a crop. The low cost, the efficiency, and capacity of the **American Beauty Dust Sprayer** is such that there is neither inducement nor necessity for taking chances.

It will outwear two of any other dusters. Is constructed of heavy sheet steel. All bearings brass. All gears steel. The American Beauty Dust Sprayer weighs 16 pounds ready to use; holds 15 pounds of the average dusting material. Price \$21, postpaid \$21.30. Ask for Special Circular, also circular and price of the "Calispray Home Mixer" for mixing insecticides.



American Beauty



At Work on High Trees

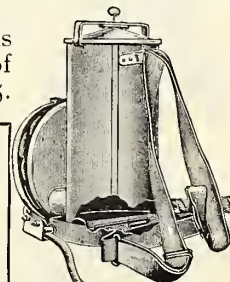
The California Beauty Duster

This has the same general appearance as the American Beauty. The size, capacity, and sifting device are reduced and modified, making it especially adapted for truck crop work.

The bellows action is so rapid as to give an almost continuous flow of dust and still completely under control at all times. This feature makes it ideal for row crops, such as potatoes, peas, beans, cabbage, cauliflower, etc.

Weights less than 10 pounds; holds 12 pounds of dust. Throws cloud of dust 12 feet. Price \$14, ppd. \$14.25.

The increased demand for Dusters or Dry Sprayers during the past few years is sufficient evidence that the merits of the **DRY METHOD** of spraying are approved by the growers as a most efficient method.



The California



California Beauty Duster

The "Little Beauty" Garden Duster

is the most powerful hand Garden Duster made. With the "Little Beauty" and Calispray "Garden Dust" No. 82, the housewife is prepared to combat almost any garden pest which may attack her flowers, vegetable-garden, berry-vines, or fruit trees.

The powerful bellows drives a perfect cloud of fine, clinging dust a distance of 12 to 15 feet, making it easily possible to care for plants of all kinds, including small trees.

The feed-chamber is so arranged as to feed dust into the moving air-blast, and gives an even feed whether the Duster is directed upward, downward, or horizontally.

The "Little Beauty" is constructed of only the best materials available, and with reasonable care will last for years—and this little "big" machine costs only \$2.50, postpaid \$2.65.



No. 82 Garden Dust. Lb. 65 cts., postpaid 75 cts.; 5 lbs. \$2.45, postpaid \$2.60.

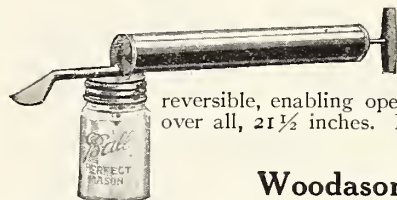


Little Beauty

The Calispray Garden Duster



is the best built Duster of its type, the inexpensive plunger type with open feed-chamber. It is simple in construction, made of the best materials, and very serviceable for dusting plants, roses, or a small kitchen-garden. Price \$1, postpaid \$1.10.



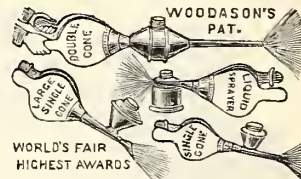
No. 131 Lowell Powder Duster

Easy to operate. Fill reservoir with dry powder, such as Paris green, hellebore, powdered arsenate of lead, etc. Size of spray regulated by operation of plunger. Elbow reversible, enabling operator to spray up or down. Pump cylinder $1\frac{3}{4}$ inches diameter, 14 inches long. Length over all, $21\frac{1}{2}$ inches. Reservoir, one pint Mason fruit-jar. 75 cts., postpaid 90 cts.

Woodason's Powder and Liquid Spraying Apparatus

For the destruction of insects, rust, smut, mildew, blight, rot, etc., in houses, gardens, orchards or fields.

Single-cone Insect Powder Bellows. Will last a lifetime; never fails completely to destroy bed-bugs, roaches, moths, mosquitos, flies, fleas on dogs, lice on birds, animals, plants, etc. Being strong, it blows the powder well behind the woodwork and into the cracks where the insects breed in houses, hotels, camps, henneries, greenhouses, hospitals, schools, jails, police stations, asylums, poorhouses, etc. Single-cone Powder Bellows, small size, \$3; large size, \$4.75. Liquid-spraying Bellows, small size, \$4; large size, \$4.75; postage 25 cts.



Acme Single Powder Gun

Consists of a tight, valveless bellows equipped with a distributing tube, or nozzle, a funnel, a spreader for diffusing the spray, and an elbow for placing the spray on the under side of the leaves. Handles of convenient length; bellows of fine russet leather. A practical, efficient method of applying the principles of dry spraying by hand, at a reasonable price. \$1.75, postpaid \$2.



The Bug Death Sifter

This Sifter is for applying any quantity or variety of dry insecticide on potatoes, melons, cucumbers, cabbages, cauliflower, etc., such as land plaster, or lime mixed with Paris green or arsenate of lead, or any of the numerous manufactured varieties. It is conceded, by all who have knowledge of the Sifter, to be the fastest, easiest, cheapest, and only implement made that will cover large vines, using any of the dry mixtures, *as fast as a man can walk*. 75 cts., postpaid 90 cts.



Dickey Duster

For use in applying dry insecticides to small flower- or vegetable-gardens. 50 cts., postpaid 60 cts.



The increased demand for Dusters or Dry Sprayers during the past few years is sufficient evidence that the merits of the Dry Method of spraying are approved by the growers as a most efficient method.

PRUNING TOOLS

Searight Extension Tree-Trimmer

Has a compound lever head and is made with a hook and side lever. It is calculated for heavy work and will cut a limb up to 1 1/4 inches in diameter. Instead of running the rod connecting the knife lever along one side the pole to a handle lever, we have placed the handle lever on the opposite side, which allows the rod to cross the pole. As a result one-half the strain is thrown on one side of the pole and one-half on the other, which gives about double strength, and instead of the pole warping and bending, it has a tendency to remain straight and stiff.

The strength, durability, and easy cutting qualities of these Trimmers will appeal to both the merchant who handles them, and the man who may have the pleasure to use them. Each Trimmer is fully warranted.

With 8-foot solid pole.....	\$5 00	Postpaid	With 12-foot solid pole.....	\$5 50	Postpaid
With 8-foot jointed pole, 2 sections.....	6 00	\$6 20	With 12-foot jointed pole, 3 sections.....	6 75	\$7 00
With 10-foot solid pole.....	5 25		With 16-foot jointed pole, 4 sections.....	7 50	7 75

No. 777. Searight Two Hand Pruner

Drop forged with 26-inch handle

The 777 is designed on scientific principles and is the result of several months' study and experimental work.

The blade positively will not cut or dig into the hook nor push the branch from between it and the hook.

This is a tool of class, with more desirable features and easier cutting qualities than have ever before been combined in a single tool. Has 26-inch handle.

Price \$3.50; postpaid \$3.75

Tiffany's Improved All Steel Double-Cut Pruner

Cuts all around the limb and does not bruise the bark. Made on honor from start to finish. This entire tool is forged from bars of fine crucible steel carefully tempered in oil and fitted with short hardwood hand-grips which cannot come off, split, or pinch the fingers.

The jaws of this Pruner open very quickly without spreading the handles too far apart, slip onto limbs easily and work into narrow places. They are so designed that large limbs are held close to the joint, which gives great leverage, and as the blade works on the draw-cut principle, we have a very smooth and easy cutting Pruner.

Grafting Tool

Tiffany forged steel oil-tempered Grafting Tool. Light, strong, handy, and efficient. \$1.50 each; postpaid.

GRAFTING WAX. For grafting or for cuts and bruises on trees. 1/2-lb. pkg. 30 cts., postpaid 35 cts.; lb. pkg. 50 cts., postpaid 60 cts.

Grafting Tool

Searight Extension

Cuts 1 1/2-inch limbs

Double cut, length 24 inches, \$3.50; postpaid, \$3.75.

"McKenney" · The World's Best Tree Trimmer

The McKenney Tree Pruners were designed and built to meet the requirements of the professional fruit-growers of America. They have installed in them all the features that go to make up a perfect pruning tool. What we claim for the "McKenney" Pruner:

(1) The easiest cutting Pruner in the world.
(2) The only perfect cutting Pruner in the world—one that does not injure the bark in any way, as both blades have cutting edges.

(3) The only Pruner that will cut seasoned limbs 1 1/2 inches in diameter.

(4) The lightest Pruner on the market.

(5) "McKenney" Pruners are made of steel throughout. Nothing about them to break.

The blades on the McKenney Pruners are dropped forged from bar steel and therefore are as strong as they can possibly be made.

The No. 1 cuts limbs 1 inch in diameter. The No. 2 cuts limbs 1 1/2 inches in diameter.

No. 1, 23 inches, \$4.50, postpaid \$4.70; No. 2, 30 inches, \$6, postpaid \$6.25.

Little Giant Pruning Hook and Saw

Little Giant Pruning Hook and Saw

This Pruner fills a long-felt need, as it combines two useful tools in one. Can be used with or without pole.

The saw is detached when its use is not required on large limbs. Length of saw 12 inches. Hook will cut any branch 3/4-inch

diameter. Hook and Saw (without pole), \$2.75; postpaid \$2.90.

No. 25 Hand Pruning Saw

In order to make our line of Pruners complete, we have added a bracket Hand Pruning Saw, with a blade so arranged as to be turned instantly to any angle. Length of blade, 14 inches center to center of holes. \$2; postpaid, \$2.15.

No. 25 Hand Pruning Saw

DISSTON'S PRUNING SAWS

Disston's Handy Kit No. 107

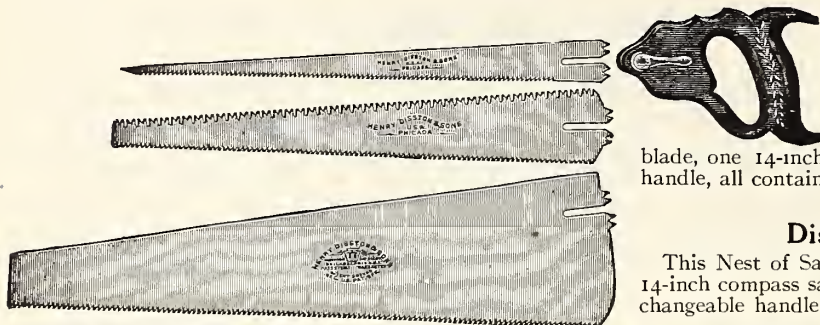
This Kit consists of one 20-inch cross-cut blade, one 14-inch compass blade, one 16-inch pruning blade, and handle, all contained in a neat canvas case. \$5, postpaid \$5.25.

Disston's No. 3 Nest of Saws

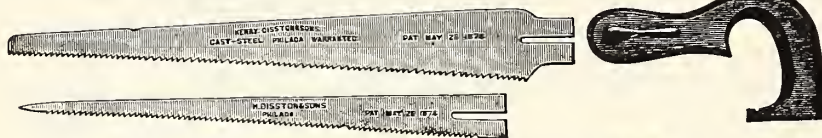
This Nest of Saws consists of one 16-inch pruning saw blade, one 14-inch compass saw blade, one 10-inch keyhole saw blade and interchangeable handle. \$2, postpaid \$2.15.

No. 17 Triangle Pruning Saw

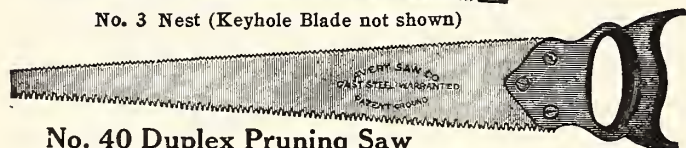
Oval steel back, straight tapered point, beech handle, varnished edges, three brass screws. Handle has extra-large grip for use with gloved hand. Blued steel blade. Length of blade 20 inches center to center of holes. \$2, postpaid \$2.15.



No. 107 Kit

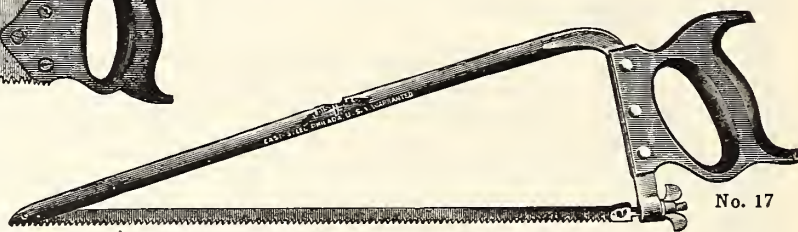


No. 3 Nest (Keyhole Blade not shown)



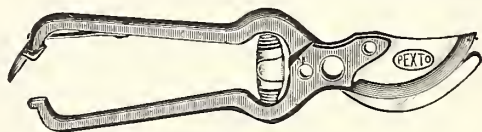
No. 40 Duplex Pruning Saw

An extremely handy tool for pruning. The well-tempered blade combines two cutting edges—a fine tooth edge for dry pruning and a coarser edge for green pruning. The blade is secured to the beech handle by three brass screws. 16-inch \$1.10, postpaid \$1.25; 20-inch \$1.25, postpaid \$1.40.



No. 17

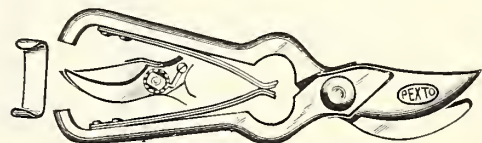
PEXTO PRUNING SHEARS



Nos. 50 and 55

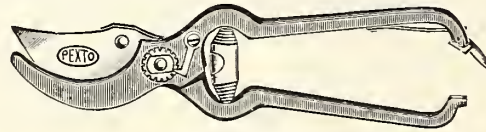
California Pattern. Tool steel blade, riveted to head; volute spring; malleable iron head and handles.

No. 50.	9-inch, black finish.....	\$1 00	Postpaid \$1 10
No. 55.	9-inch, full polished.....	1 50	1 60



No. R85

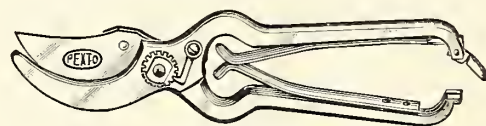
Swiss Pattern. Full polished, best quality crucible steel blade, riveted on, ground convex; regulating ratchet nut; double flat brass springs; removable handle-clip. Each Shear individually boxed, with an extra blade, which practically doubles the life of the shear. 8½-inch \$3, postpaid \$3.10.



Nos. R70 and R170

Western Pattern, regulating ratchet nut, Tool steel blade, fastened to handle with screws; volute spring.

No. R 70.	9-inch, polished head, black finished handles.....	Postpaid \$1 50	\$1 60
No. R170.	9-inch, full polished and nickel-plated...	2 25	2 35



Nos. R60 and R65

California Pattern, with regulating ratchet nut; polished tool steel blade of extra quality, tempered; double flat brass springs.

No. R60.	9-inch, black finish.....	\$1 25	Postpaid \$1 35
No. R65.	9-inch, full polished.....	1 75	1 85

No. R95 Whitney Pattern

Drop forged from high-grade tool steel, full polished. Handles are comfortably shaped. These Shears have the famous adjusting nut and regulating ratchet. Blades are made from high carbon crucible steel. The long bevel makes cutting easy. Spring especially designed, is of the combination coil and grooved wheel type, the wheel operating on a raised track, which makes easy action in opening and closing and does not tire the hand. This style highly recommended by fruit-growers and agricultural colleges. 10-inch \$4, postpaid \$4.10.





Top Cutting

Little Wonder Hedge Trimmer

Makes hedge-cutting a positive pleasure.
Trims every variety of hedge grown.
Accomplishes as much in one hour in the cool of the day as can be done in ten hours with hand shears.
Guaranteed to cut from five to ten times faster than hand-shear method and to do better work—more even.

The last word in modern hedge-trimming, barring none.

Sturdily built—simple in construction.

Weight of machine from ten to sixteen pounds, according to size.

Various attachments adapt the machine for use on flat, round, or pivot tops, also side cutting.

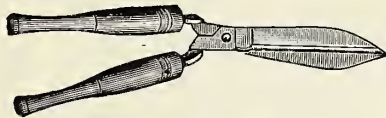
Thousands in use in the United States and foreign countries. Ask for special circular.



Side Cutting

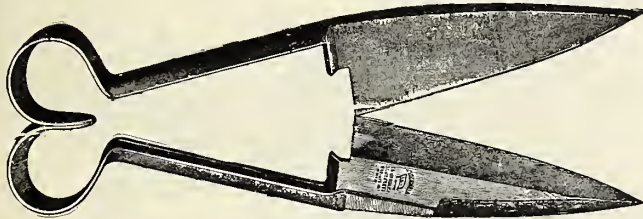
	Electric	Hand-driven
30-inch Hedge Trimmer	\$103 00	\$25 00
40-inch Hedge Trimmer	106 50	27 50
60-inch Hedge Trimmer	114 00	35 00
Lawn Clipper Attachment for Hedge Trimmers	18 00	

Side-Cutting Carriage for Hedge Trimmers	\$4 50
30-inch Lawn Weed Clipper, complete	35 00
40-inch Lawn Weed Clipper, complete	40 00



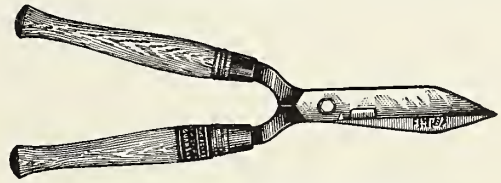
No. 100L. Hedge Shears

6-in. \$1.50; postpaid \$1.70.



No. 1914. Sheep Shears

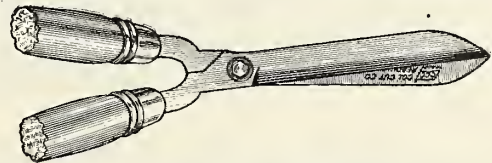
6-in. \$1.75; postpaid \$1.90.



No. 101. Hedge Shears

9-in. \$2.50; postpaid \$2.75.

10-in. \$2.75; postpaid \$3.

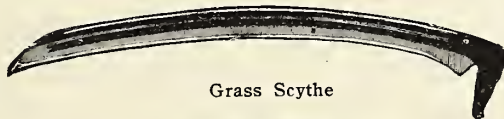


No. 106. Lawn Shears

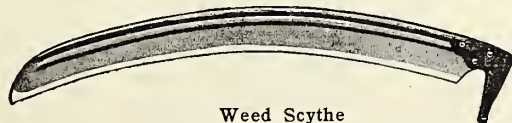
9-in. \$3.75; postpaid \$3.95.



No. 11. Trowel Shank Grass Shears



Grass Scythe



Weed Scythe

Scythes and Snaths

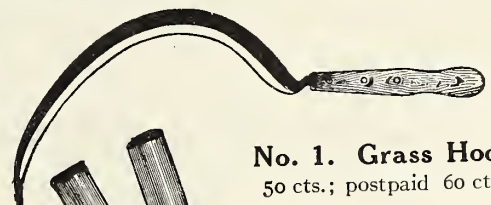
		Postpaid
Grass Scythe, 28 to 34-inch	\$1 50	\$1 75
Grass Scythe, European style	2 25	2 50
Weed Scythe, 26 to 28-inch	1 50	1 75
Bush Scythe, 18 to 22-inch	1 50	1 75
Patent Grass Snath No. 50	1 50	1 75
Bush Snath No. 100, with 2 rings	1 75	2 00
Grass Snath, European Style	1 00	1 15
Grass Snath, European Style, with ring and extra key	1 50	1 75

Grass Shears

No. 11. Trowel Shank, 5½-in. 50 cts.; postpaid 60c.

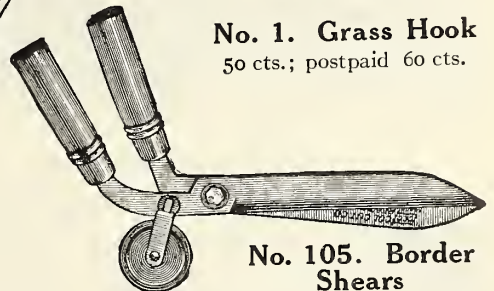
No. 4. Straight Shank, 5½-in. 65 cts.; postpaid 75c.

No. 0267. Trowel Shank, 6-in., full polished \$1, postpaid \$1.10.



No. 1. Grass Hook

50 cts.; postpaid 60 cts.

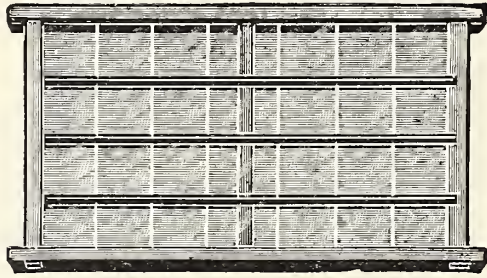


No. 105. Border Shears

9-in. \$4.50; postpaid \$4.75.



Bush Scythe

Metropolitan Hotbed Sash

Metropolitan Hotbed Sash are made from the very best grade of air-dried Gulf cypress, smoothly milled. All parts are mortised and tenoned on the very latest and specially built machines to insure accurate, smooth, and tight-fitting joints, which is very essential in Hotbed Sash. All the bars are beveled at the bottom, to admit the maximum amount of light. They are carefully assembled and clamped perfectly square and nailed with cement coated nails and steel barbed dowel pins.

All sash are made $\frac{1}{2}$ inch wider than finished size, and then run through a specially built machine which finishes the sash the same width and planes the sides perfectly straight to prevent any open space between sash when laid on the frame. After the above work is performed, each sash is carefully examined for any possible defects in material or workmanship and all sash passed O. K. are run twice through a three-drum sandpapering machine to make them perfectly smooth and all the same thickness.

PRICES

Four rows, single-layer, putty Sash; either for 6 x 8 or 8 x 10 glass. Sash are 3 feet 2 inches wide by 7 feet long, $1\frac{3}{4}$ inches thick, made of best cypress, with round iron crossbar in center, and with horns.

Unpainted, without glass, 1 to 5 sash.....	Each \$4 40
Unpainted, without glass, 5 to 10 sash.....	4 15
Unpainted, without glass, 10 to 20 sash.....	3 90

For 4 x 6 foot, add 60 cts. per sash to above prices.

Special prices on larger quantities.

We can furnish any other kind or size sash required.

Glass for Hotbed Sash

B Single Strength.	Per box
6 x 8, 150 lights.....	\$4 25
8 x 10, 90 lights.....	4 25
10 x 12, 60 lights.....	4 25
8 x 10, A, Single Strength.....	4 75

10 boxes and upward, 25 cts. per box less than above prices.

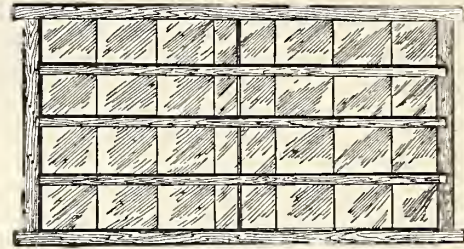
**Hotbed Thermometer**

No. 960L. With brass point. \$2.75, postpaid \$2.85.

Neponset Flower Pots

Neponset flower pots are universally used by home growers of flowers and vegetables, by truck-gardeners, by florists, by every grower of plants on a small or large scale. They are light, durable, and inexpensive. When used for transplanting they can be handled quickly and the construction permits removing easily if desired. They are ideal for rooting or shipping vegetable and flowering plants of any description. They are made from a tough, lasting, and waterproof paper and will not break in shipment or handling.

	25	Postpaid	100	Postpaid
2 1/4-in.....	\$0 30	\$0 40	\$0 75	\$0 90
3-in.....	40	50	1 00	1 15
4-in.....	65	75	2 00	2 20

Eureka Hotbed Sash

Eureka Sash are manufactured from Gulf cypress, every piece of which is guaranteed to be free of sap or defects of any kind.

They are made perfect and so accurately fitted that they will hold together in good shape for many years under ordinary usage.

All Sash are rabbeted for lapped glass and are of standard size, 3 feet by 4 inches by 6 feet for four rows of glass 8 inches wide. Each sash will hold 28 panes of 8 by 10-inch glass. The stiles, or outside bars, are $1\frac{3}{8}$ inches thick and about $2\frac{1}{2}$ inches wide. The three rabbeted bars are $1\frac{3}{8}$ inches thick. An oak cross-bar runs through the rabbeted bars and half-way into the stiles. Furnished knocked down, unpainted and without glass. Price, \$3.50 each; per bundle of five, \$15. See left-hand column of this page for prices of glass.

Mastica

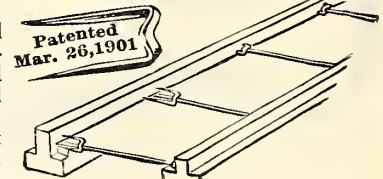
Mastica is elastic and tenacious. In a few hours after use, a skin or film is formed, preventing the evaporation of the oils and leaving it pliable for years. On account of this quality, it admits of the expansion and contraction which is continual in the wood-work of a greenhouse from moisture and heat. One gallon will cover about 290 running feet, one side.

Qt. can (weight 5 pounds).....	\$0 75	Postpaid \$0 85
Gal. can (weight 15 pounds).....	2 50	2 80

MASTICA GLAZING MACHINE. For applying Mastica. \$2.75, postpaid \$3.

Peerless Glazing Points

Used by all practical florists and market-gardeners for glazing hotbed sash. No. 1. For small single-thick glass. No. 2. For large, single - thick glass. Both sizes, 75 cts. per 1,000; postpaid 85 cts.

"PEERLESS" GLAZING POINT.
(Improved Van Reyper.)

Patented
Mar. 26, 1901

This is the "Wire Tie"**WHY THEY ARE USED**

The one great object of "Wire Tie" is to give the grower a cheap and more practical device than cord to tie up plants, at the same time making it flexible on both stake and plant, thereby preventing breakage.

"Wire Tie" is an absolute necessity for Chrysanthemums; they are no less indispensable for Hyacinths and all other plants you now tie to a stake with cord.

While creating a neatness never to be found with the use of cord, still they are so simple a child can apply them.

PRICES

	Ppd.
100.....	\$0 40
500.....	1 50
1,000.....	2 00

	Ppd.
100.....	\$0 40
500.....	1 50
1,000.....	2 15

The Saxmayer Vegetable Tyer

PATENTS PENDING

The Saxmayer Vegetable Tyer is no longer an experiment, as is testified by hundreds of satisfied customers, but is an essential part of every successful market-gardener's equipment. It will save the labor of from three to six persons per day, or a money saving of from \$4 to \$8 per day. The machine will pay for itself in a very few weeks.

It works so easily that a child can do more work with it than a number of grown persons could do by hand in the same time. The operator sits comfortably at the machine and works in perfect ease.

The machine ties any kind of bunch vegetables except the large dozen-bunches of celery. It uses either a four-ply cord or, by changing the knotter bill, a No. 13 tape.

It takes an expert to tie by hand. If you let a green person do it, you pay big in lost efficiency and poor work.

Mark This One Big Point. In these days of high wages, scarcity of labor, cost of twine, and labor troubles, no bunch gardener can afford to stick to the old methods of bygone days.

Remember that money paid out for hand tying is gone forever, but money paid out for a Tying Machine is with you, serving you day after day, year after year.

No. 1. Large Tyer for Foot Power . \$125

No. 1. Large Tyer with Electric Motor . 150

The Midget Saxmayer

This is our latest model and is designed to fill a long-felt want for a light, compact buncher at a moderate price. It uses string or tape, operates by hand, and is thoroughly practical for field or washroom, nursery, or greenhouse. Fully guaranteed. Weight, 18 lbs. Price, \$37.50.

anted. Weight, 18 lbs.
Price, \$37.50.

Germãco

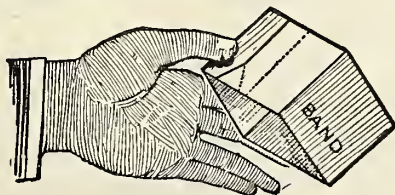
Hotkaps

NEW METHOD OF PLANT PROTECTION

A money-maker. Matures crops earlier. Shields plants from frost, wind, and rain; protects them from insects. Miniature "hothouses." An amazing invention—crop insurance. A revolutionary device that saves farmers much in time, labor, and money. One roll of a thousand, \$10, postage or express extra. Write for quantity prices and pamphlet.

Miller's No-Fold Dirt Bands

These Bands require no folding; there is no lock used, that will come open in handling; there is no glue used, to open up when you water. The substance used to hold the Band will not come open, but makes it waterproof.



SIZES AND PRICES	250	500	1,000
2 x 2 x 2.....	\$0 50	\$0 90	\$1 50
3 x 3 x 3.....	1 00	1 65	3 00
4 x 4 x 3.....	1 25	2 15	4 00

Postage on 250, 15 cts.; on 500, 20 cts.; on 1,000, 25 cts.

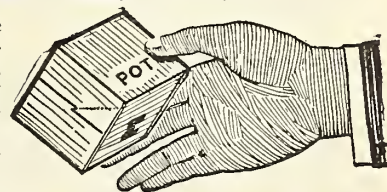


No. 1 Large Tyer



Miller's Lock-Process Dirt Pots

Miller's Pots are made of high-grade water-finished board. Briefly, our Pots when locked stay locked; there is no occasion for the sides or bottoms of our Pots to become loose, and they contain no glue to loosen up or become sour.



Patent Pending. Note the solid bottom

SIZES AND PRICES	250	500	1,000
2 x 2 x 2.....	\$0 85	\$1 40	\$2 50
3 x 3 x 3.....	1 15	2 00	3 75
4 x 4 x 3½.....	1 50	2 65	5 00

Postage on 250, 30 cts.; on 500, 45 cts.; on 1,000, 75 cts.

Tilley's Ladders

They are the most convenient orchard ladders ever produced for trimming trees and picking fruit. Made very light and strong. The best that can be produced.

Single Ladders

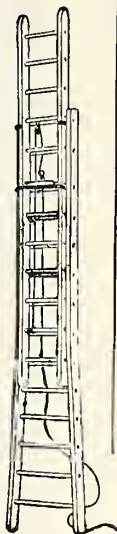
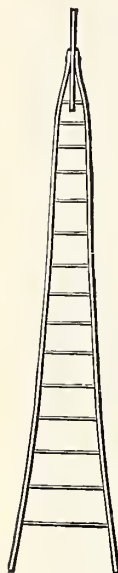
OPEN TOP

10-foot.....	\$3 25
12-foot.....	3 75
14-foot.....	4 25
16-foot.....	4 75
18-foot.....	5 75
20-foot.....	6 75
22-foot.....	7 75
24-foot.....	8 50
26-foot.....	10 50
28-foot.....	13 75

POINTED TOP

13-foot.....	4 00
15-foot.....	4 75
17-foot.....	5 50
19-foot.....	6 25
21-foot.....	7 00
25-foot.....	10 00
27-foot.....	11 00

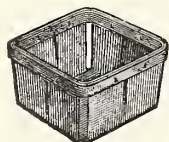
Point included in above measurement.



Extension Ladders

OPEN TOP

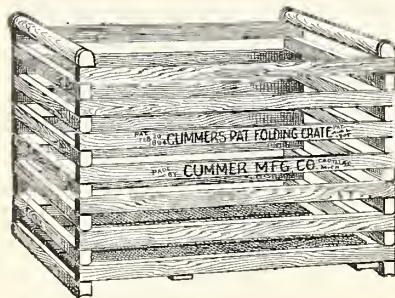
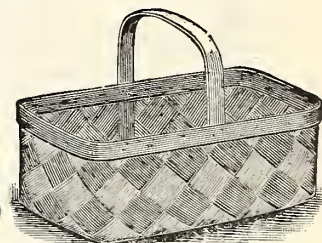
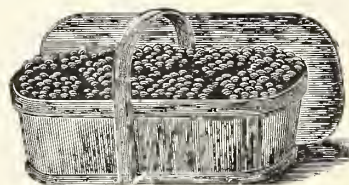
24-foot, extends to 21 feet.....	\$10 75
26-foot, extends to 23 feet.....	11 50
28-foot, extends to 25 feet.....	12 25
30-foot, extends to 27 feet.....	13 00



Berry Baskets, Diamond Market Baskets, Grape Baskets, Stave Baskets, and Hand-made Baskets. When you are in the market for Baskets, please ask us for prices.

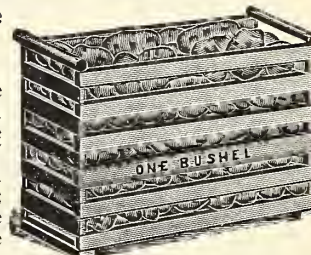
FRUIT PACKAGES

We make a specialty of Fruit Packages, all kinds and sizes to suit the gardening and fruit-growing trade in western Pennsylvania, among which are the following:



Cumber Folding Fruit and Vegetable Crate

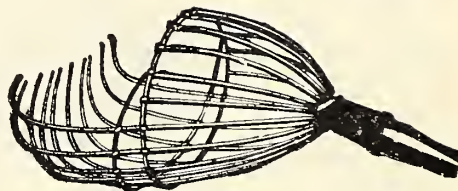
Made of heavy slats for constant use as a field or storage Crate. They are light, strong and durable, simple and easily folded. No nails, screws, or tools required. Size of Crate (outside) 11 7/8 inches wide, 20 1/2 inches long, 13 1/2 inches high. Size of slats 5/8 x 1 5/8 inch, with corners rounded Capacity 2,350 cubic inches. 60 cts. each; postpaid 70c.; \$6 per doz., \$24 for 50, \$46 per 100. We will deliver these Crates at your railroad station in lots of 50 or 100 at the above prices, direct from factory.



Pennsylvania Fruit-Picker

Price 50 cts., postpaid 60 cts.

More Pennsylvania Fruit-Pickers are used than all other makes combined because it is reliable and sells at a reasonable price. As a Fruit-Picker it has no superior. Made of heavy galvanized wire, and easily adjusted to a pole. It will gather apples, peaches, pears, and all similar fruits.



EXTENSION LADDERS, continued

32-foot, extends to 29 feet.....	\$14 00
34-foot, extends to 31 feet.....	15 00

POINTED TOP

23-foot, extends to 20 feet.....	10 00
25-foot, extends to 22 feet.....	10 75
27-foot, extends to 24 feet.....	11 50
29-foot, extends to 26 feet.....	12 50
31-foot, extends to 28 feet.....	13 50
33-foot, extends to 30 feet.....	14 50
35-foot, extends to 32 feet.....	15 50

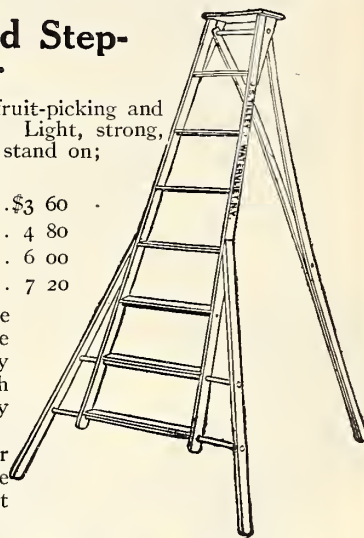
Omega Tripod Step-Ladder

Particularly adapted for fruit-picking and for use on uneven ground. Light, strong, rigid, broad-based. Easy to stand on; easy to move; folds up snug.

6-step.....	\$3 60
8-step.....	4 80
10-step.....	6 00
12-step.....	7 20

A first-class, well-made article. All flat steps. The two lower are supported by and rest on rounds which tie, support and thoroughly brace the main ladder.

Tilley Ladders are neither painted nor stained and the purchasers can see just what they are buying.



FRUIT-CROP INSURANCE

Honey-bees put the pollen where it stays put. They insure cross-pollination. Every fruit-grower should "do his bit" and keep a few colonies of bees. It pays. See pages 161 and 162.

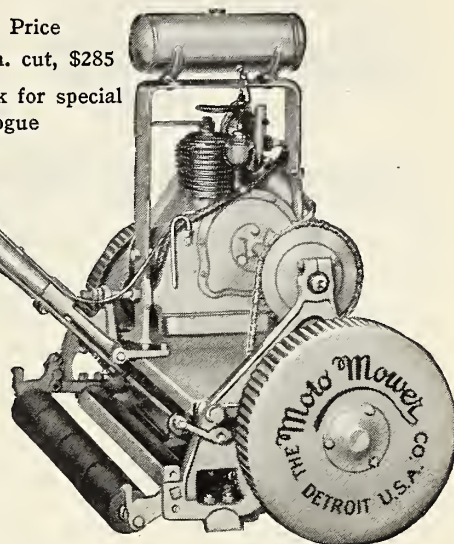
**DETROIT MODEL**

The Detroit Model Moto-Mower is a development of years of experience and hard usage. It is dependable, long-lived, scientifically built. Frame and major parts are of tough malleable iron. Power plant is simple and highly efficient, contributing to lightness and ease of handling. Two handle-grip controls enable the operator to stop, start and turn the Moto-Mower on its own power. It will climb sharp grades, cut cleanly and evenly, and trim close to obstructions. It is just the thing for cutting over terraces, around flower-beds, along hedges, and so on. It is unusually economical as to fuel, oil, and maintenance.

Equipped with automatic fool-proof, dry-band clutch, Thermoid lined. Self-adjusting Timken bearings at ends of cutter bar. Four-cycle motor, air cooled. Magneto fully waterproof.

Price
27-in. cut, \$285

Ask for special
catalogue

**GENERAL SPECIFICATIONS**

Width of cut, 27 inches.
Cutting adjustment, $\frac{1}{2}$ to $3\frac{1}{2}$ inches.
Cutting speed, $\frac{1}{2}$ to $3\frac{1}{2}$ miles per hour.
Cutting capacity, 4 to 5 acres per day.
Climbs, 35 per cent grade.
Gasoline consumption per day, about 1 gallon.
Weight (net), 200 pounds.

MOWER

Blades, revolving, 5 crucible steel (tempered).
Blade, bottom, turned up edge (tempered).
Clutches, dry disc type.
Control, one or both wheels can be engaged either together or separately.
Reel bearings, Timken roller.
Handle, seamless steel tubing, fully braced.
Wood Roller, sectional 3-inch diameter, running on steel rod.

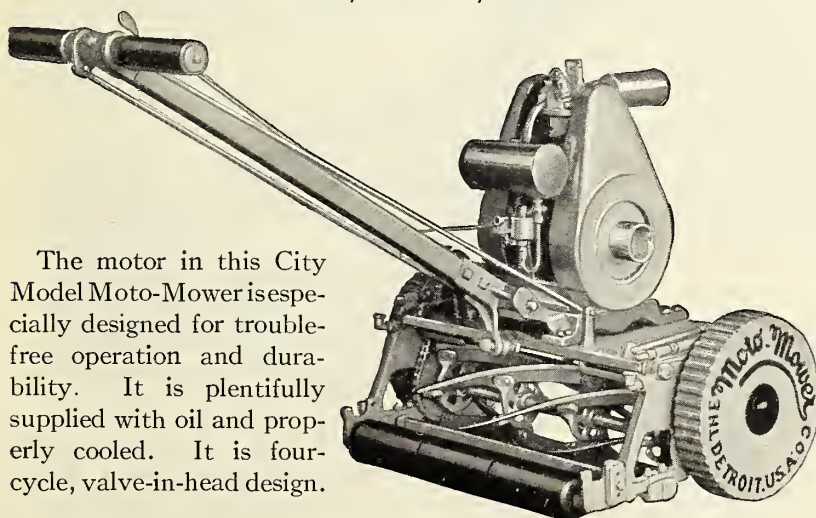
MOTOR

Four-cycle valve in the head, air cooled.
Bore, $2\frac{1}{2}$ inches.
Stroke, $2\frac{1}{2}$ inches.
Horsepower, $2\frac{1}{2}$.
Speed, 600 to 2,000 r.p.m.
Control, throttle.
Ignition, magneto.
Carburetor, set jet.

"City Model" Moto-Mower

The City Model is a quality-built Mower at a price within the reach of those who have moderately large as well as small lawns to care for. It has mechanical features which give it unusual ease of operation, dependability, and long life. Blowers on both sides of the motor cylinder make cooling doubly efficient. Throttle control gives operator full range of speed. Large oil-reservoir below crankcase gives great oil-capacity and unusual cooling of oil.

Price, 21-inch cut, \$185



The motor in this City Model Moto-Mower is especially designed for trouble-free operation and durability. It is plentifully supplied with oil and properly cooled. It is four-cycle, valve-in-head design.

GENERAL SPECIFICATIONS

Width of Cut.....21 inches
Cutting Adjustment..... $\frac{5}{16}$ to $2\frac{1}{2}$ inches
Cutting Speed..... $\frac{1}{2}$ to $3\frac{1}{2}$ M.P.H.
Cutting Capacity..... $2\frac{1}{2}$ to 3 acres per day
Climbs.....25 per cent grade
Gasoline Consumption per day, about 1 gallon
Weight.....(net) 185 pounds
Weight....(Crated for shipment) 235 pounds
Color.....Gray enamel

MOTOR

Four-Cycle, Valve in Head, Air Cooled

Bore..... $2\frac{1}{4}$ inches
Stroke..... $2\frac{1}{4}$ inches
Horsepower.....1
Speed.....600 to 2,000 r. p. m.
Parts to lubricate.....1 place
Control.....Throttle
Ignition.....Magneto
Carburetor...Set jet, no adjustment necessary

MOWER

Blades, revolving, 5 Crucible Steel (tempered)
Blade, bottom...Turned up edge (tempered)
Clutches.....Dry band type
Control.....One or both wheels can be engaged either together or separately
Reel Bearings.....Timken roller
Handle.....Wood, full braced
Side Frames.....Malleable iron
Chains.....Diamond roller

The Improved Jacobsen Heavy Duty Power Lawn Mower

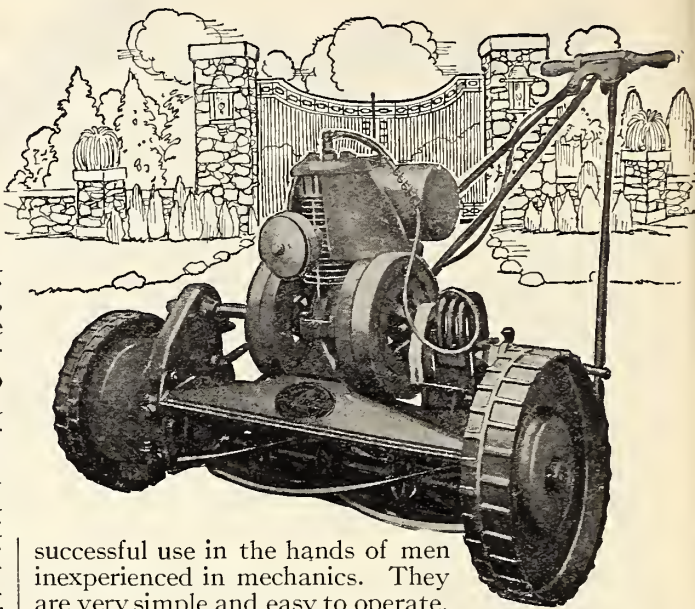
4 ACRE

Today, wherever there is extensive grass cutting to be done on home lawns, industrial or school lawns, in parks, cemeteries or on golf courses, the hum of the Power Lawn Mower is heard. Jacobsen Power Mowers have many years, successful performance to their credit. They are built by power specialists in a factory exclusively devoted to the building of Power Lawn Mowers.

The Improved Jacobsen 4-Acre is a heavy-duty Mower that represents the highest type of walking Power Mower. For years it has been an outstanding success, and the improved model of today, with increased motor power and various mechanical refinements, will meet the most exacting standards of strenuous, every-day work for many years, and quickly pay for itself in time and labor saved.

Better Lawns at Lower Cost

The Improved Jacobsen 4-Acre Heavy Duty Power Lawn Mower travels on its own power and cuts a 24-inch swath at the rate of 4 to 5 acres a day on a gallon of gas. Work formerly requiring four or five men with hand mowers becomes a one-man job with the 4-Acre, and where one man takes care of the lawn work with a hand mower, the time he can save with a 4-Acre can be profitably spent in otherwise beautifying the grounds. The frequent, even, clean cutting possible with a 4-Acre Mower results in a better-kept lawn and a firmer, more luxuriant sod. Hundreds of these Mowers have seen years of



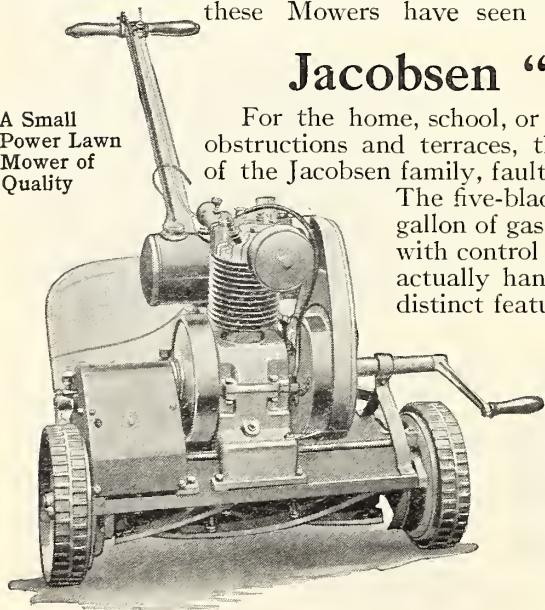
successful use in the hands of men inexperienced in mechanics. They are very simple and easy to operate.

Finely Engineered

The motor is specially designed for Power Lawn Mower work. It is not a "makeshift" like so many small motors, but is a high-grade, completely equipped motor. It has high-tension magneto, float type carburetor, and is air cooled. The 4-Acre has an automobile type differential, and separate clutch control for traction unit and cutting reel, hence steering, turning and close-up cutting is as easy as with a hand mower. The steel-cut gears run in oil and are encased in dust-proof housings, insuring long life and trouble-free service. The knives of the 4-Acre are sharpened by the Mowers' own power through special reverse gears. The friction clutch prevents damage when sticks or stones catch in the knives. It is sold under a rigid guarantee. Price \$285.

Jacobsen "Junior" Power Lawn Mower

A Small
Power Lawn
Mower of
Quality



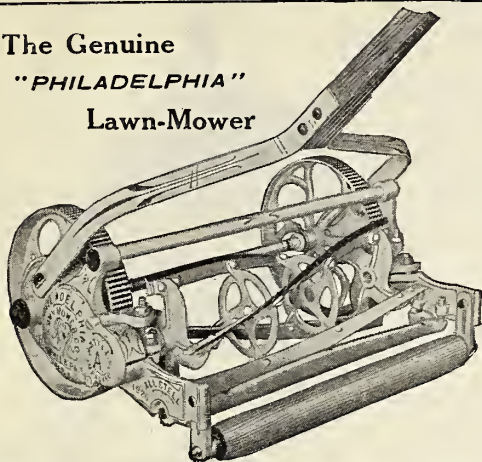
For the home, school, or industrial lawn of moderate size, or for lawns with numerous obstructions and terraces, this Mower has proven very popular. It is a worthy member of the Jacobsen family, faultlessly engineered, and designed for sturdy, simple dependability. The five-blade reel cuts a 19-inch swath at the rate of two acres a day on a gallon of gas. Travels on its own power and the cutting reel is power driven with control at the handle—no pushing or pulling necessary. The "Junior" actually handles easier than a hand mower. The self-sharpening device is a distinct feature.

A Well-Balanced Motor

The motor of the "Junior" Mower is a 4-cycle, 1 horsepower, slow-speed motor with a $2\frac{1}{2} \times 2\frac{1}{2}$ cylinder, overhead valves, crank-case and oil-pump lubrication, and is equipped with a dependable magneto—eliminating troublesome coils and batteries. It starts with a crank—not a rope pull. The transmission and clutches are entirely enclosed in dust-proof housings—no exposed chains or gears. It is indeed a *quality* small Power Lawn Mower.

The Jacobsen "Junior" Power Lawn Mower is remarkable in its performance and fully guaranteed. Price \$205

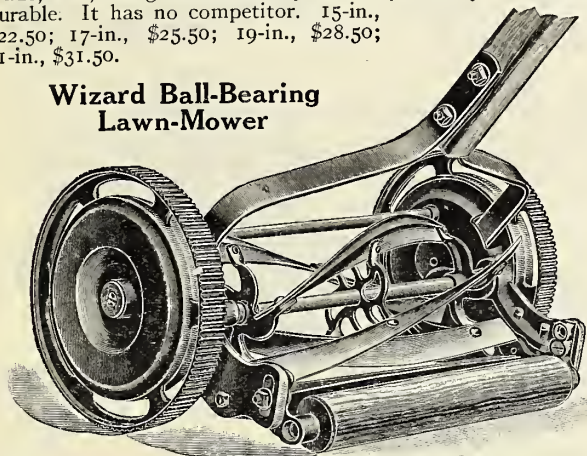
**The Genuine
"PHILADELPHIA"
Lawn-Mower**



Four blades, 10-inch wheel, 6½-inch cylinder, train of three gears, double ratchet.

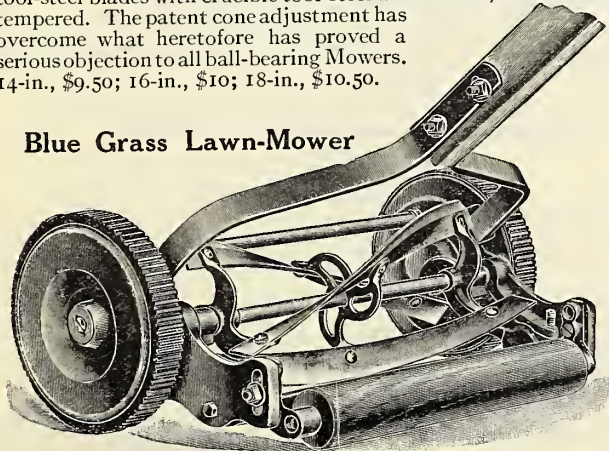
Style "A" All Steel. This is the lightest draft Lawn-Mower made, and, being made entirely of steel, it is by far the most durable. It has no competitor. 15-in., \$22.50; 17-in., \$25.50; 19-in., \$28.50; 21-in., \$31.50.

**Wizard Ball-Bearing
Lawn-Mower**



In the Wizard we offer a high-grade Lawn-Mower at a low price. It is equipped with 9-inch drive wheels, four tempered tool-steel blades with crucible tool-steel under-knife, hardened and tempered. The patent cone adjustment has overcome what heretofore has proved a serious objection to all ball-bearing Mowers. 14-in., \$9.50; 16-in., \$10; 18-in., \$10.50.

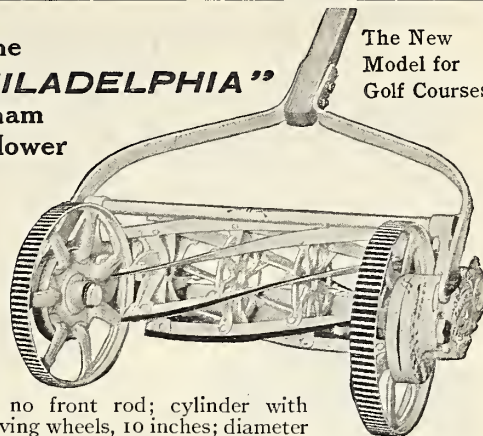
Blue Grass Lawn-Mower



The Blue Grass Lawn-Mower has 8-inch drive wheel, shaft ½-inch diameter in adjustable plain bearing box, and three tempered tool-steel knives on reel. In the Blue Grass Lawn-Mower we have the best value that has ever been offered in a low-price machine. 12-in., \$6.25; 14-in., \$6.50; 16-in., \$7; 18-in., \$7.25.

**Genuine
"PHILADELPHIA"
Graham
Golf Mower**

The New
Model for
Golf Courses



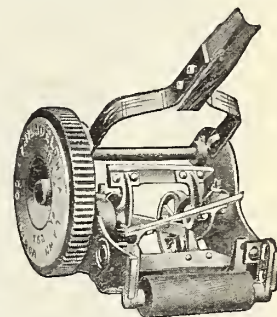
All steel; no front rod; cylinder with 8 blades; driving wheels, 10 inches; diameter of cylinder, 7½ in. Train of Gears on both sides. Height of cut ½ in. Sectional wood or iron roller.

The **Graham Golf All Steel** is a New Model for Golf Courses. Made entirely of all steel castings, frame, sides, wheels, etc., and far surpasses all other Golf Mowers. It is sturdy, strong and fool-proof—practically indestructible. Will withstand more abuse and hard work than any other Mower. Removable box caps for taking the cylinder out without disturbing the frame or adjustments. Oil-cups lasting for five hours' continuous use. With eight blades, cuts extremely close and fine. 15-inch, \$36; 17-inch, \$40; 19-inch, \$44.

**Genuine "PHILADELPHIA"
Lawn Trimmer**

Cylinder with 4 blades; driving wheel, 8 inches; single pinion; cuts with ¼ inch of edge; diameter of cylinder, 5½ inches.

An efficient and complete Lawn-Trimmer, built for durability and service. Positively cuts smoothly to ¼ inch of wall, post, tree, or fence. Used throughout the world in cemeteries, parks, and large estates. Vanadium crucible steel blades. Use of shears or sickle unnecessary. 6-inch, \$10.75.



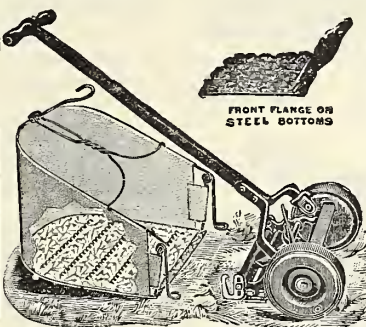
**Easy Emptying Grass
Catchers**

With Handle and Hook Brackets. Quickly Attached and Detached. Simple, Practical, Durable.

No. 10G. Galvanized; fits 12- to 18-in. mower. \$1.50.

No. 12G. Galvanized; fits 16- to 22-in. mower. \$1.75.

Galvanized sheet steel bottom. Round back, heavy duck sides. Pro-



jections on the bottom prevent grass from slipping forward while moving.

No. 26G. Galvanized; fits 12- to 16-in. mower.....\$1 00
No. 27G. Galvanized; fits 16- to 20-in. mower..... 1 50

Has a central handle which gives a balanced grip and permits of the Catcher being carried with one hand when filled with grass. Galvanized bottom.

FARM AND GARDEN BOOKS. See page 207 for our list of the best Farm and Garden Books; Poultry Books, page 208.

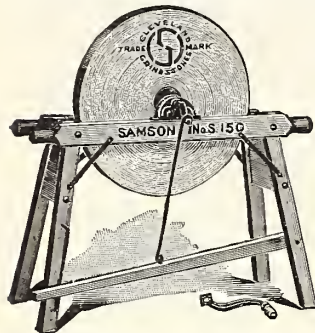
The Sterling Grindstone

(BALL-BEARING)

A steel tubular frame, mounted Grindstone. Ball-bearing throughout. Absolutely the best mounted Grindstone on the market.

A double-treadle frame embracing the bicycle features of our bi-treadle. All rods and bolts are threaded; there are no cotter pins and no loose parts. Permanent rigidity is insured. Provided with a large comfortable seat and clothes protector.

Fitted on crank and shaft with improved ball bearings—encased—consisting of a heavy steel ball casing and a cone or sleeve turned out of solid cold-rolled steel shafting, balls cannot work loose or drop out. Weight of stone, 50 to 60 lbs. Price, \$9.50.



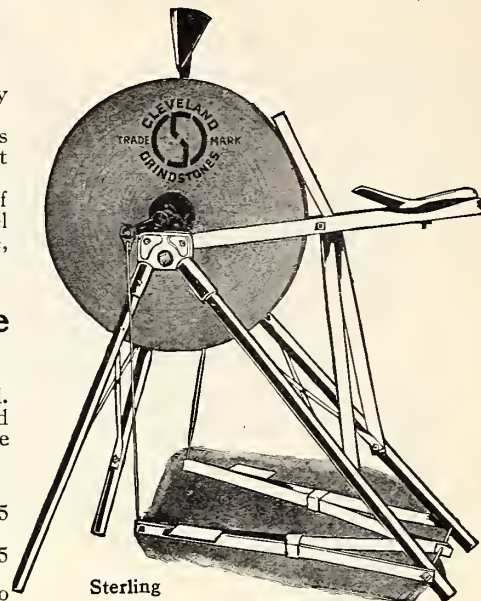
Samson Mounted Grindstone

Samson Mounted Grindstone

Specially Selected Stone

The frame is made of the best seasoned hardwood. The legs are securely framed into the sidebars and fastened by a bolt. The ends of the sidebars are neatly turned to serve as handles.

No. 150 Stone, weighs 100 to 110 lbs., usual thickness $1\frac{3}{4}$ to $2\frac{1}{4}$ inches..... \$8 75
 No. 155 Stone, weighs 70 to 80 lbs., usual thickness $1\frac{3}{4}$ to $2\frac{1}{4}$ inches..... 8 25
 No. 160 Stone, weighs 40 to 50 lbs., usual thickness $1\frac{3}{4}$ to $2\frac{1}{4}$ inches..... 7 50



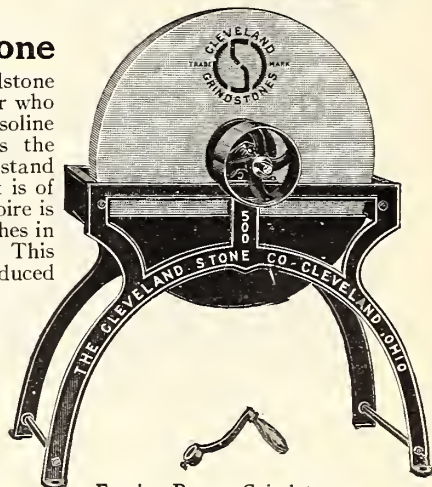
Sterling



Improved Ball-Bearing Family Grindstone
 shaft and steel ball bearings. Prices no higher than for the ordinary style.

Empire Power Grindstone

The Empire Ball-bearing Power Grindstone is designed to meet the needs of the farmer who desires a grindstone to be operated by a gasoline engine. The Empire not only possesses the needed strength and staunchness to withstand the strenuous service of everyday use, but is of light weight and easily handled. The Empire is equipped with genuine Berea Stone, 24 inches in diameter and 2 inches to $3\frac{1}{2}$ inches thick. This is the most efficient and the best grit produced for general use and especially for farm tools. Weight, complete, about 225 lbs. Price, complete, with pulley and crank handle, \$25.



Empire Power Grindstone

Improved Ball-Bearing Family Grindstone

The best family Grindstone made, without exception. Supplied with a fine specially selected Berea Grindstone, turned and rubbed smooth, mounted on a steel

		Postpaid		Postpaid
8-inch.....	\$3 25	\$3 50	12-inch.....	\$4 25
10-inch.....	3 75	4 00		\$4 50

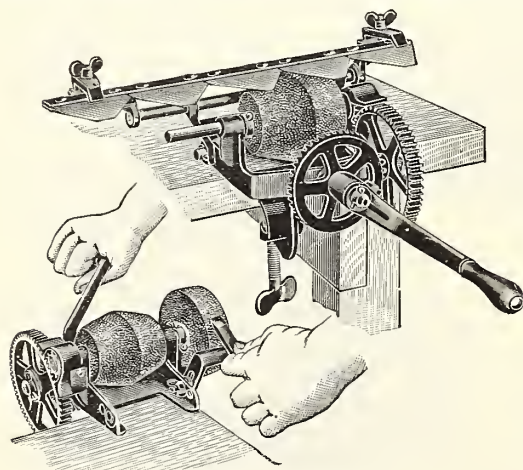
No kitchen equipment is complete without one of these Grindstones. Will last a lifetime

Carborundum Grinder

This machine is especially adapted to work on the farm. It is equipped with a simple, practical device for sharpening mower-section knives, a double bevel carborundum wheel for this work, a special tool wheel and a tool-rest. Each wheel is mounted on a special iron center. The machine is strong, durable, and most convenient for sharpening all edged farm tools. The Grinder is converted into a tool-grinding machine by simply attaching the special tool wheel to the end of the shaft. The double bevel carborundum wheel is $3\frac{1}{2}$ inches in diameter and $3\frac{1}{2}$ inches wide. The carborundum tool wheel is 4 inches in diameter by $1\frac{1}{4}$ inches thick. Price \$7.50, postpaid, \$7.80.

Aloxite Scythe Stones

Aloxite Scythe Stones must not be classed with the ordinary Scythe Stones. The old style stones are merely sandstone. They simply rub the edge on. Aloxite cuts it—fast and clean. 10-in. 25 cts., 12-in. 30 cts., 10-in. (heavy) 30 cts. Postage 10 cts. each extra.



Carborundum Grinder

POST-HOLE DIGGERS

Standard Earth Augers

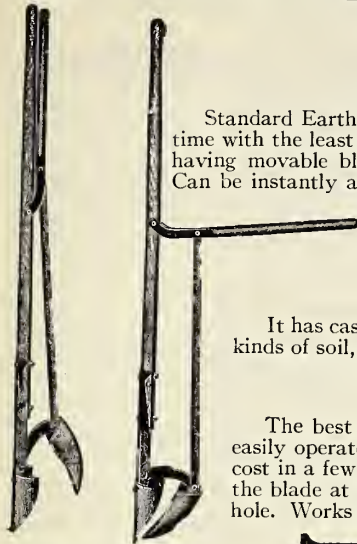
Standard Earth Augers are "standard" because they will do the most work in the shortest time with the least labor, and are made of the highest grade material. It is the only Auger made having movable blades which open to discharge contents. Will dump sticky clay with ease. Can be instantly adjusted to bore many different-sized holes. In fact, it has no equal for any kind of earth-boring. It bores seven different-sized holes—8, 9, 10, 11, 12, 13, and 14 inches in diameter and 3½ feet deep. The stem can be fitted with pipe extension to bore extra-deep holes or wells. \$5.50 each, postpaid \$5.85.

Universal

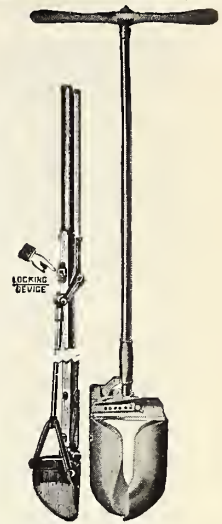
It has cast steel blade of best quality, strong, durable and easily operated. Works in all kinds of soil, clay, sand, gravel, shale, etc. \$2.75 each, postpaid \$3.10.

Lock Lever

The best implement ever put into the ground for the purpose of digging holes. It is easily operated. A boy can work with it. A trial will convince anyone that it will save its cost in a few days' use. The cast steel blade is fitted with automatic self-lock which locks the blade at right angles so that both hands may be used in lifting the ground out of the hole. Works equally well in any kind of soil from muck to stones. \$2.25 ea., postpaid \$2.55.



Open
Universal
Closed



Lock-lever
Stand-ard

Tamping Head Steel Digger

All-steel, long and wide cutting blade with large tamping head made of 1-inch round steel; length over all 5 feet, 9 inches. \$2.25 each.

Wood-Chopper's Wedges

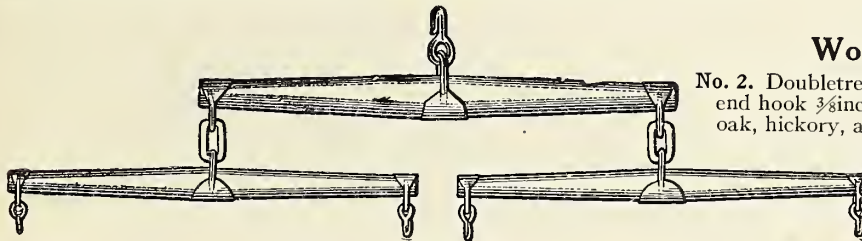
- No. 136. Square head; axe finish; weight 3, 4, and 5 lbs. 10 cts. per lb.
No. 137. Round head; Truckee Pattern; weight 3, 4, and 5 lbs. 10 cts. per lb.



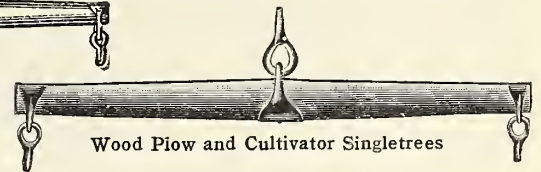
Truckee Pattern

Wood Plow Doubletrees

No. 2. Doubletree 3 x 36 inches, singletrees 2½ x 30 inches, end hook ¾ inch. The above set made from second-growth oak, hickory, and ash, painted red. Complete \$4.50.



Wood Plow Doubletrees



Wood Plow and Cultivator Singletrees

Wood Plow and Cultivator Singletree

WITH RING IN CENTER

26-inch.....	\$0 95
28-inch.....	1 05
30-inch.....	1 15



Agricultural Doubletrees and Yoke

Agricultural Doubletrees and Yoke

No. 401. Complete hitch for land-rollers, hay rakes, tedders, mowing machines or any implement where flat doubletree is used. Painted red. Complete, including doubletree, singletrees and yoke, \$3.



Team Neck Yokes Ironed

Team Neck Yokes Ironed

Made from second-growth oak, hickory, or ash; center ring 3½-inch diameter.
No. 311A. 2¾-in. x 42 inches long, \$2; No. 311C. 3-in. x 48 inches long, \$2.75.

Wood Wagon Doubletrees

Doubletree 1¾ x 4¾ x 50 inches.
Singletree 2¾ x 34 inches. Painted red, varnished and striped.
(Not illustrated.) Per set \$5.25.

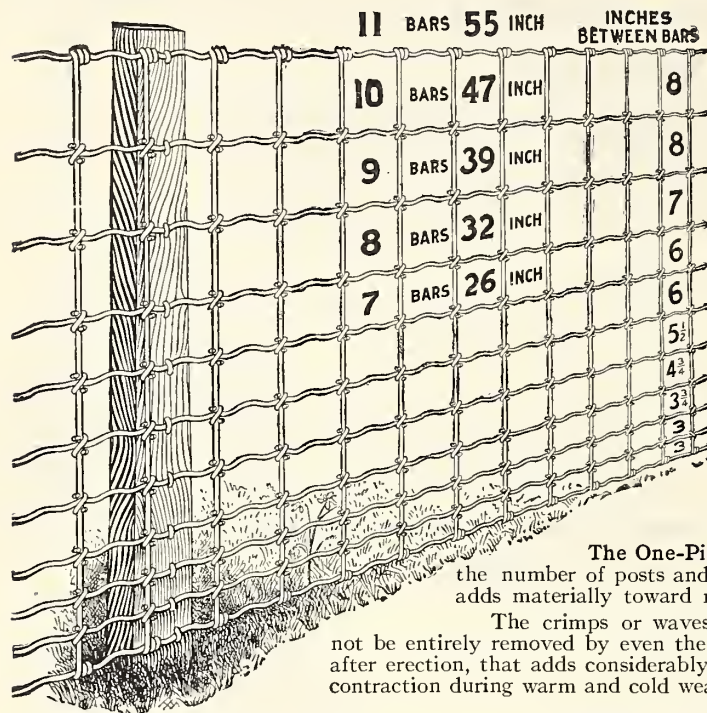


No. 41

Breast Yokes

MADE FROM HICKORY

No. 41. 2 inches x 22 inches long \$1.25.



Square Deal Farm Fence

After thirty-five years of fence-building, Keystone Steel & Wire Co. perfected "Galvannealed" Square Deal Fence. It is here at last—the farm fence that scientists say is best of all—the fence that state universities claim outstays all others; the fence that railroads choose because it is better; the fence that successful farmers everywhere are buying because it lasts two to three times longer and sells at no extra price.

The Square Deal Lock

Big bulky knots are no better from a construction standpoint, and many times worse, than the trim, compact lock which positively prevents slipping. They merely increase weight and cost of production, without increasing the life of the fence in the least.

The manufacture of this lock requires the least possible amount of material. It absolutely cannot slip.

The crimp within the "Square Deal" lock allows for considerable flexibility without any chance of slipping. This permits Square Deal Fence to fit the hills and hollows easily without bending the stay wires.

The One-Piece Stay Wire seems to be the logical style of stay to reduce the number of posts and thus lessen the cost and labor of setting. The stiff stay adds materially toward making fence-building easy.

The crimps or waves put into the line wires during the weaving process cannot be entirely removed by even the strongest stretchers. They give the fence an elastic tension after erection, that adds considerably to the trim appearance and provides for the expansion and contraction during warm and cold weather.

PRICES PER ROD

No. 11. Top and bottom wire No. 9, intermediate and stay wires			No. 9. All wires including stays No. 9. Put up in 20-rod rolls		
No. 11. Put up in 20-rod rolls			Per rod		
No. 832.	32 in. high, 8 bars, 6-in. stays, weight	9.8 lbs....\$0 47	No. 636.	36 in. high, 6 bars, 12-in. stays, weight	9.4 lbs., spaced 6.6, 7, 8, and 9 inches between bars.....\$0 39
No. 939.	39 in. high, 9 bars, 12-in. stays, weight	8.8 lbs.... 40	No. 832.	32 in. high, 8 bars, 6-in. stays, weight	14.9 lbs.... 67
No. 1047.	47 in. high, 10 bars, 12-in. stays, weight	9.9 lbs.... 44	No. 1047.	47 in. high, 10 bars, 12-in. stays, weight	14.6 lbs.... 62
No. 1155.	55 in. high, 11 bars, 12-in. stays, weight	11.0 lbs.... 50	No. 1155.	55 in. high, 11 bars, 12-in. stays, weight	16.4 lbs.... 70
In 10-rod rolls 25 cts. per roll extra			In 10-rod rolls 25 cts. per roll extra		
			Staples. 1¼-inch. 7 cts. per lb.		

We have listed above the most popular sizes and styles which we carry in stock at Pittsburgh. We will send on request a complete catalogue of Square Deal Fences, any of which can be shipped direct from factory.

Ideal Steel Posts

These Posts outlast three ordinary wood posts. No holes to dig—no setting—no tamping. Drive over 300 in a day. Put up all your fencing in short order—and put it up to stay for years. In repairing fences you can do more in one day than in five days setting wood posts.

Built like a railroad rail—the strongest form of fence post-construction known.

With their large split-wing patented anchor plates will root firmly into the ground as driven and hold the fence securely in line. This method of attaching gives greatly increased ground facing and does away entirely with the shearing point that is set up when the anchor plates are applied crossways. By attaching the anchor in this manner we avoid any fulcrum point, and thus secure greater strength.

A continuous series of lugs are rolled along both sides of the face of the post. These lugs are spaced every ¾-inch and on account of this close spacing, it is possible to securely fasten every line wire of a woven fence if that is desired. Under ordinary conditions it is considered ample if every other wire is stapled to the post.

The lugs on both sides hold the fence wires away from the face of the post, thus preventing accumulation of dirt and moisture.

Ideal Posts are finished with a heavy coat of a special steel paint with unusual high preservative qualities. Their color is willow green and the paint is baked on under a high temperature.

Ideal Steel Posts will give you many years of satisfactory service. Frequent notches on the face of the post make it possible to fasten any or every line wire with special hump clamps which are easily attached. The Clamps come formed to fit snugly around the post. Just place them in position and bend arm back over stem of post. An ordinary pair of pliers or a hammer will do the trick. Seven clamps furnished free with each post. No staples to buy.

	Each	Each 100 or more
6-ft. (weight 8.6 lbs.).....	\$0 45	\$0 40
6½-ft. (weight 9.3 lbs.).....	48	43
7-ft. (weight 9.9 lbs.).....	51	46
7½-ft. (weight 10.6 lbs.).....	55	49
8-ft. (weight 11.3 lbs.).....	58	52

Prices on end and corner posts quoted on request



American Galvanized Steel Fence Posts

"The Post Without a Fault"

The New American Galvanized Post surpasses all others in Strength—Durability—Economy.

The cylindrical shape gives greater resistance at the ground line and makes it easier to drive the post. The Line Posts are 14½ gauge and all parts are hot galvanized inside and out. Posts are galvanized after being formed and punched, all parts being protected by galvanizing. Line Posts, when driven, open automatically, providing self-anchorage.

Twenty years of actual service is convincing proof of the lasting quality of the American Post. Nothing adds more to the appearance of a farm than fence stretched on neat, uniform, and sightly steel posts.

For woven-wire fence, barb wire, and plain wire.

Galvanized Line Posts

	Each
6-foot; weight 8.4 lbs.....	\$0 66
6½-foot; weight 9.1 lbs.....	69
7-foot; weight 9.8 lbs.....	75
7½-foot; weight 10.5 lbs.....	81
8-foot; weight 11.2 lbs.....	90

Special prices on lots of 25 posts and upward.

End and Corner Posts

For Setting in Concrete

	Each
End Posts. 7-foot; weight 48.3 lbs.....	\$3 75
7½-foot; weight 51.9 lbs.....	4 00
8-foot; weight 54.5 lbs.....	4 25
Corner Posts. 7-foot; weight 67.7 lbs.....	5 50
7½-foot; weight 72.7 lbs.....	5 75
8-foot; weight 75.9 lbs.....	6 00

All End Posts are equipped with one brace, Corner Posts with two braces. Shipped complete with all fittings ready to set in concrete. All End and Corner Posts shipped direct from factory.

Extras

	Each
Ornamental Tops. For Line Posts.....	\$0 20
For End and Corner Posts.....	40
Driving Caps. For Line Posts.....	40

Little Giant Wire Stretcher

The Little Giant Wire Stretcher is the best crank stretcher made. It is constructed entirely of malleable iron. \$1.25, postpaid \$1.40.



Little
Giant
Wire
Stretcher

American Single Wire Stretcher

American Single Wire Stretcher

Made of malleable iron. Absolutely the best Single Wire Stretcher in the world. It is just what you want for stretching barbed and plain wire. \$1.25, postpaid \$1.40.

Special Barb Wire

Our Special Barb Wire is made of No. 14 galvanized, strong steel wire, and has a breaking strength of 1,000 pounds. The barbs are short and humane.

	80-rod reel
Two-Point Cattle. Barbs about 5 inches apart.....	\$2 50
Two-Point Hog. Barbs about 3 inches apart.....	2 70

Regular Barb Wire

Made from No. 12 galvanized wire. We can furnish in different styles as follows:

	80-rod reel
Two-Point Cattle. Barbs about 5 inches apart.....	\$3 35
Two-Point Hog. Barbs about 3 inches apart.....	3 55
Four-Point Cattle. Barbs about 5 inches apart.....	3 60
Four-Point Hog. Barbs about 3 inches apart.....	3 80

If preferred we can furnish above in regular reels weighing from 100 to 120 pounds at \$4.15 per 100 pounds.

Galvanized Plain Wire

	100-lb. roll
No. 9.....	\$3 90
No. 10.....	3 95
No. 11.....	4 00
No. 12.....	4 10

Galvanized Coil Spring Wire

No. 9. Price per 100 lbs. \$4.

Special prices will be quoted on any of the above wire in ton or half-ton lots

Galvanized Staples

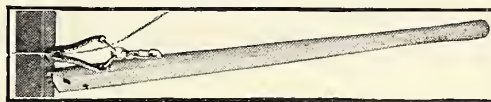
1 or 1¼-inch. Price per lb. 7 cts.
1 or 1¼-inch. Price per 100-lb. keg \$4.15.

Wire Nails

	100-lb. keg
20d Common Nails.....	\$3 35
10d Common Nails.....	3 55
8d Common Nails.....	3 65
9d Common Nails.....	3 65

Prices on other sizes quoted on request. Prices subject to change without notice.

The Townsend Wire Stretcher



This is made with a wooden lever, or handle 3 feet in length, to which is attached malleable iron pinchers, into which are riveted serrated steel grips; warranted not to slip. It is a substantial and very durable implement. It stretches large-meshed woven wire much better than most of the Stretchers which are made especially for this purpose, and it works equally as well on plain, twisted, and barbed wire. \$1.75, postpaid \$1.90.

Cheney Fencing Tool

This tool is simply a Plain Face Hammer weighing 1 pound and 4 ounces, with a ¼ inch hole bored in the neck. It is fully warranted as a Hammer as well as a Fencing Tool.

Claws will grip wire, making perfect lever. When wires are tight, simply turn entire hammer around, making splice. Price \$1 50, postpaid \$1.60.



Square Deal Poultry Fence

This is the ideal Poultry Fence because it will turn the smallest chick, also keep out the small varmints that ravage the chicken-pens. The first five line wires at the bottom are only 1 inch apart.

THE NON-SLIP KNOT. The stiff picket-like stay-wires used in building Square Deal Poultry Fence are attached to the line wires with the famous Square Deal knot—guaranteed to hold under any and all conditions. The best test of this knot is to examine the fence yourself, either in the roll or erected, and you will find that you cannot slip these knots even with a pair of pliers.

Square Deal Fence is made only from the best grade of open hearth steel, smelted in the same mills that make the Fence. The big 5,000-pound ingots are poured, then rolled into blooms, then to billets, then to rods and finally drawn into wire, ready to be woven into the very best Fence that more than thirty years of fence-making experience have shown how to build.

Square Deal Poultry Fence requires no top and bottom boards, and fewer line posts, to keep it erect and trim. Thus it costs, erected, much less than poultry netting. Lasts many times longer than netting because its wires are twice the size of netting wires.

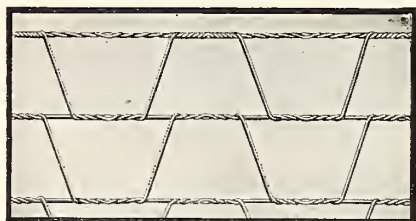
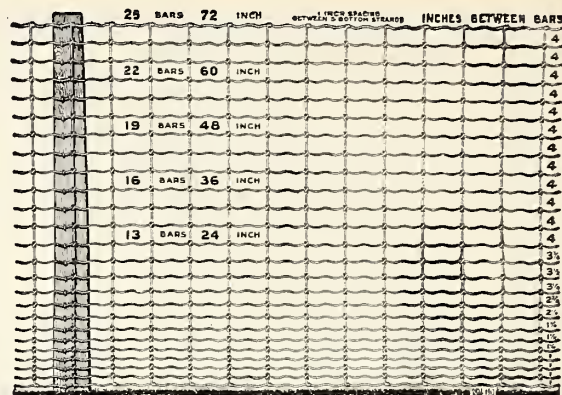
This is a real Fence—stretches up tight and trim, without top or bottom boards and will not bag or sag. Fewer posts are required than for netting and it lasts several times as long.

Although not a stock Fence, it turns any ordinary farm stock with ease, in case of emergency, owing to its closely spaced No. 14½ gauge line wires.

The top and bottom wires are No. 11 gauge with No. 14½ gauge filler wires.

Prices per 165-Foot Roll			
No. 1636. 36 inches high, 16 bars.....	\$4 65	No. 2260. 60 inches high, 22 bars.....	\$6 65
No. 1948. 48 inches high, 19 bars.....	5 65	No. 2572. 72 inches high, 25 bars.....	7 65

Staples for the above, 10 cts. per pound



U. S. POULTRY FENCE

"The Netting That Stands Alone"

The introduction of U. S. Poultry Fence opened an entirely new era in the manufacture and sale of poultry netting. Today, as then, U. S. Poultry Fence truly "stands alone" in its field.

Built on miniature scale of farm fence interwoven with parallel wires and hinge joints so that it stretches to the posts straight, even, and nice, without buckling, bagging, or sagging. It is so stiff and satisfactory that it does not require top rail and baseboard or so many posts as the old-style netting. Is guaranteed five to six times as strong and at the same time it stretches to the posts straight, even, and nice, without buckling, bagging, or sagging. It is so stiff and satisfactory that it does not require top rail and baseboard or so many posts as the old-style netting. Is guaranteed five to six times as strong and at the same time it stretches to the posts straight, even, and nice, without buckling, bagging, or sagging.

least 100 per cent better in every way. All parallel wires are of even length and meshes of uniform size. They cannot be otherwise erected. It is the strongest, cheapest, most sightly, and best fence for the purpose yet invented.

U. S. Poultry Fence is made in heights from 1 to 6 feet. Galvanized after weaving. Put up in 150-foot rolls. 2-inch mesh made of No. 19 gauge wire; 1-inch mesh, No. 20 gauge wire.

No. 19 gauge wire, 1-inch mesh, No. 20 gauge wire.

Prices per 150-Foot Roll					
Height	2-in. mesh	1-in. mesh	Height	2-in. mesh	1-in. mesh
1 foot.....	\$1 65	\$3 15	3 feet.....	\$3 95	\$7 75
1½ feet.....	2 25	4 50	4 feet.....	5 25	10 25
2 feet.....	2 85	5 75	5 feet.....	6 50	
2½ feet.....	3 40	6 85	6 feet.....	7 75	

Staples 10 cts. per pound

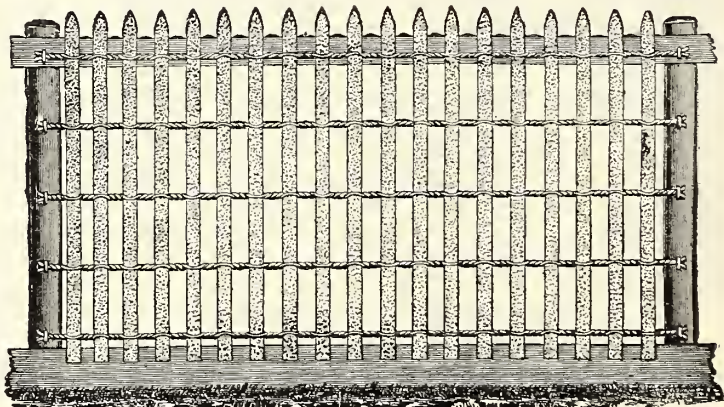
Combination Picket Fence

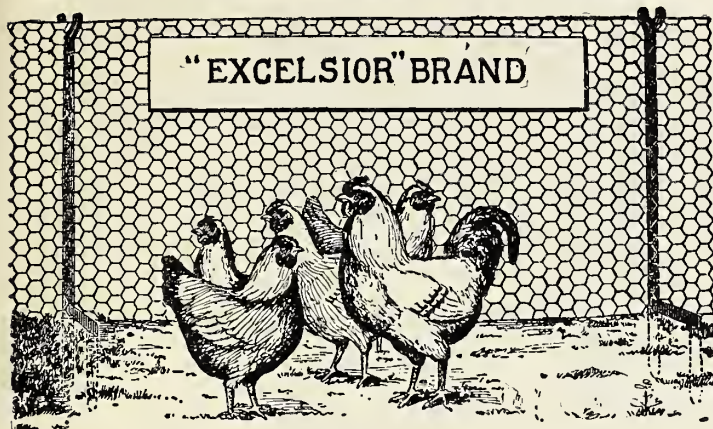
This popular Fence, for gardens, yards, vacant lots, etc., is made of hardwood pickets 1½ inches wide, ½ inch thick, and 4 feet long, woven together, 2 inches apart, with five cables of No. 12 heavy galvanized wire, pointed at top with neat Gothic points. The finish is far superior to that ordinarily used. Instead of using a cheap solution of Venetian Red, which soon washes off, leaving the picket exposed to the weather, we use Red Creo-Oxide. Creo-Oxide serves a double purpose—the pure oxide used stays on the picket, giving it long protection and the pure creosote which is also used in the mixture acts as a preservative to the picket. While the illustration shows the fence with the rail at top and board at bottom, neither of these is necessary.

PRICES

100-foot Roll, 4 ft. high.....	\$12 00
50-foot Roll, 4 ft. high.....	6 50

Less than 50 feet, 15 cts. per ft.





American Poultry-Yard Gates

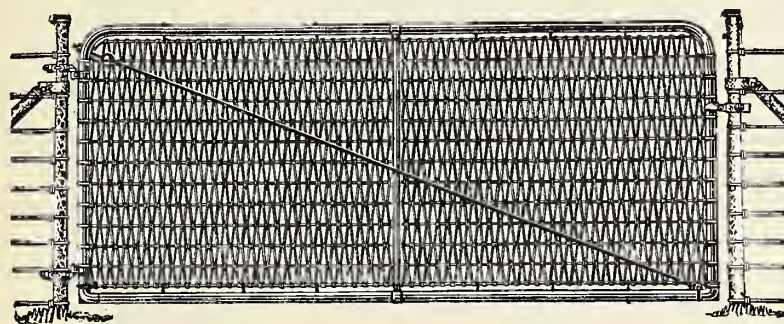
American Steel Gates, always efficient and well designed, have been improved both in structure, finish and operation. The tubular steel frames combine great strength, durability, and beauty. Gates and fittings are thoroughly galvanized.

American frames are covered or filled with a 2-inch mesh fabric of truss form, which not only proves a barrier to the smallest animals while lending bridge-like rigidity and strength, but also makes the gates unclimbable. The combination of the frame and the truss filling produces the highest type of fence gate, answering every requirement of good engineering practice.

PRICES

Each

For 3-foot opening, 42 inches high; weight 19 lbs. \$3 50
 For 3-foot opening, 50 inches high; weight 21 lbs. 3 75
 For 3-foot opening, 58 inches high; weight 23 lbs. 4 00
 Above prices include fixtures for wood posts. For fixtures for steel posts, add 50c.



Above prices include fixtures for wood posts. F.O.B. factory if not in stock. For fixtures for steel posts, add 75 cts.

"Can't Sag" Gates

"Can't Sag" Gate 52 inches high made of five 6-inch boards spaced as follows from bottom to top: 2¾, 4¾, 7¾, and 8¾ inches apart.

"Can't Sag" Gates are neither all wood nor all steel but a happy combination of the two. They retain all good features of wood Gates and the advantages of steel Gates, but have none of the drawbacks of either. They last longer than any other Gate you can build or buy. They weigh only half as much as ordinary all-wood Gates and are far stronger than any steel, wire, or gas pipe Gate made. They "Can't Sag" even a quarter of an inch. Made of "C" finish, long-leaf pine and painted a rich orange color.

If a board breaks it doesn't let the Gate sag or fall down, you simply slip out the broken board and replace it with a new one and in five minutes you have another perfect "Can't Sag" Gate as good as new and repaired at the cost of one board and a few minutes' spare time. "Can't Sag" Gates are the neatest, trimmest looking Gates ever put up. 12 feet long, 52 inches high, \$9.25; 10 ft. \$8.



"Can't Sag" Gate Steels

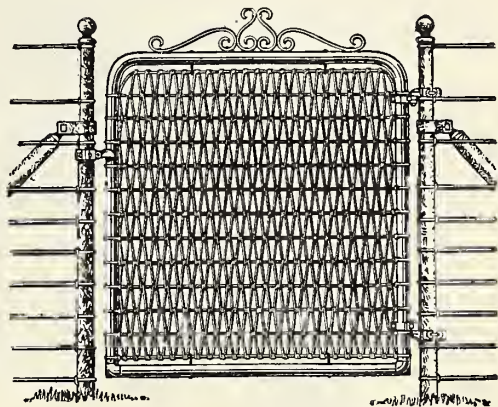
For the farmer who prefers to furnish his own lumber and make his own Gate we furnish all irons necessary to build the Gate as shown above—everything except the boards. This includes 4 pairs of Angle Steel Uprights, Double Truss Braces, Hook Lag Screws Hinges, Bolts, Washers, Lightning Socket Wrench, directions, etc. Price of set complete, \$4.

Diamond Mesh Poultry Netting

Made from No. 20 gauge wire and galvanized after weaving. Put up in 50- and 150-foot rolls

Height	2-inch mesh		1-inch mesh	
	50 ft.	150 ft.	50 ft.	150 ft.
1 foot.....	\$0 60	\$1 40	\$1 35	\$3 15
1½ feet.....		2 00		4 50
2 feet.....	1 00	2 50	2 20	5 75
2½ feet.....		3 00		6 85
3 feet.....	1 30	3 35	3 00	7 75
4 feet.....	1 70	4 50	3 85	10 25
5 feet.....	2 10	5 60		
6 feet.....	2 55	6 75		

6 feet, 1½-in. mesh, No. 16 gauge, 150-ft. roll, \$25.
 Staples 10 cts. per lb.



American Single Drive Gates

With galvanized tubular steel frame, filled with a 2-in. diamond mesh galvanized fabric which is unclimbable

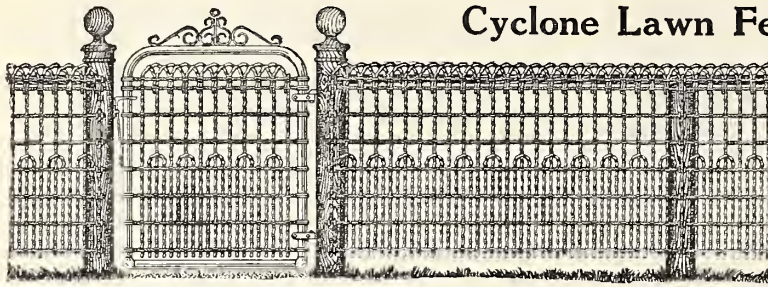
A strong, non-climbable, and economical farm Gate. Universally recognized for its simplicity and durability. In addition to upright tubular brace the frame is supported by a diagonal brace rod which keeps it firm and prevents sagging.

PRICES

Each

For 10-ft. opening, 42 in. high; weight 56 lbs. ... \$7 50
 For 10-ft. opening, 50 in. high; weight 61 lbs. ... 7 75
 For 10-ft. opening, 58 in. high; weight 67 lbs. ... 8 00
 For 12-ft. opening, 42 in. high; weight 65 lbs. ... 8 25
 For 12-ft. opening, 50 in. high; weight 71 lbs. ... 8 50
 For 12-ft. opening, 58 in. high; weight 77 lbs. ... 8 75

For fixtures for steel posts, add 75 cts.



Cyclone Lawn Fence

Makes beautiful home surroundings worth while

With Cyclone Fence enclosing your premises, you are assured success in your efforts to cultivate beautiful surroundings for your home. Flowers, lawns, gardens, trees, and shrubs have protection at all times against destructive outsiders.

Cyclone Fence is woven in beautiful, symmetrical designs that are attractive and artistic, yet unobtrusive. From a variety of handsome patterns, in standard heights, fencing may be selected to harmonize with the character of property to be enclosed.

STYLE "F" is our most popular ornamental fence for front yards, back yards or division fence. Pickets are of No. 9 heavily galvanized wire spaced 3 inches apart at top, $1\frac{3}{8}$ inches apart at bottom. Cables are of heavily galvanized wire, spaced 6 inches apart, except the two top cables, which are spaced $2\frac{3}{8}$ inches apart. Above cut shows Style F.

STYLE "L-EXTRA" is a high-grade, moderately-priced fence. Specially adapted for back yards and division fencing. Pickets of No. 9 heavily galvanized wire are spaced 3 inches apart. Cables are of heavily galvanized wire spaced 6 inches apart, except the two top cables, which are spaced $2\frac{3}{8}$ inches apart.

PRICES PER 165-FOOT ROLL

Style "F". 36 in. high; per roll.....	\$21 00
Style "F". 42 in. high; per roll.....	23 00
Style "F". 48 in. high; per roll.....	27 00
Style "L-Extra". 36 in. high; per roll.....	15 00
Style "L-Extra". 42 in. high; per roll.....	17 00
Style "L-Extra". 48 in. high; per roll.....	19 00

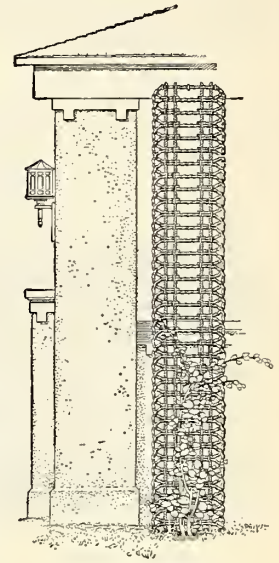
PRICES IN CUT LENGTHS

Style "F" 42 in. will be furnished in any desired length under 165 feet at 17 cts. per lineal foot. Style "L-Extra" 42 in. at 13 cts. per lineal foot.

Ask for special booklet showing Cyclone Complete Fences.

Cyclone "L-Extra" Trellis

A very durable and artistic support for climbing vines and flowers; harmonizes with home surroundings. Retains its shape perfectly; is easily and quickly placed in position and will last indefinitely. It is made of corrugated No. 11 galvanized wire, spaced 4 inches apart; cables are of No. 13 galvanized wire. Made in three widths: 18, 24, and 30 inches. Put up in 165-foot rolls.



L-Extra trellis

PRICES

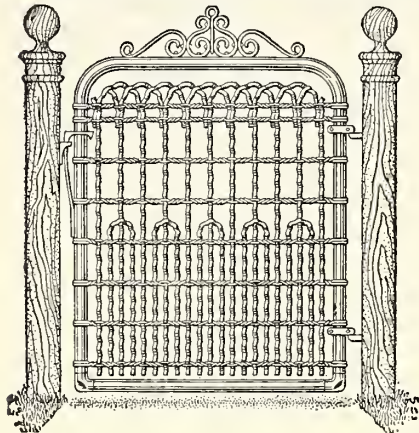
	165-foot rolls	Cut lengths
18-inch.....per roll,	\$13 50.	Per lineal foot, \$0 11
24-inch.....per roll,	15 00.	Per lineal foot, 12
30-inch.....per roll,	17 00.	Per lineal foot, 14

Cyclone Galvanized Walk Gates

A handsome and practical Gate for all home purposes and is especially suited to the front yard or garden, ornamental scroll top adds a pleasing artistic touch to Gate. Made of $1\frac{1}{8}$ -inch diameter heavy steel tubing and galvanized.

Covered with Style F fabric. Gates are made for 3-foot openings, which means distance between posts, with proper allowance for hinges and latch to fit openings. Prices, 36 in. high, \$3.75; 42 in. high, \$4; 48 in. high, \$4.25.

Prices include fixtures for wood posts. Fixtures for tubular steel posts \$1 extra. If steel post fixtures are wanted, give outside diameter of posts.



Rope

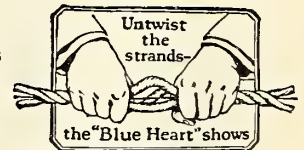
We handle the best grades of Manila and Sisal Rope; especially adapted for hay-fork outfits and other hard work where a strong, serviceable Rope is required.

H. & A. "Blue Heart" Manila Rope Guaranteed to Be Stronger than Government Standards

H. & A. "Blue Heart" Manila Rope is carefully spun from extra-long, high-grade Manila fiber. It will long outwear ordinary Rope, will resist water and weather, and remains pliable and easy to work with under most adverse conditions.

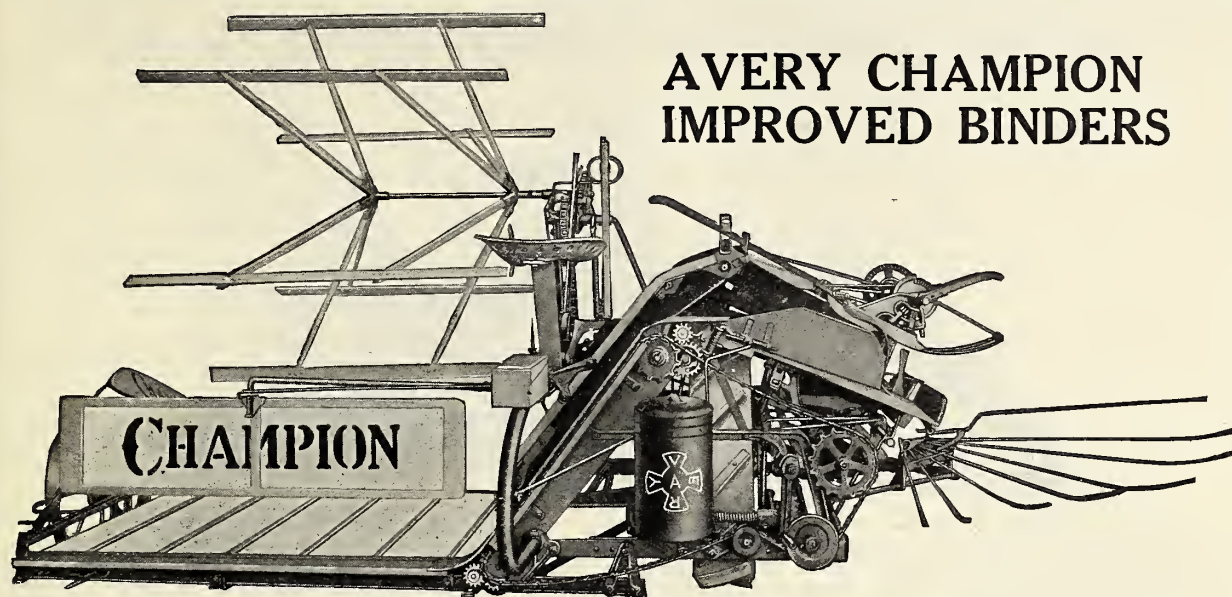
SIZES AND PRICES PER FOOT

	$\frac{1}{4}$ -in.	$\frac{3}{8}$ -in.	$\frac{1}{2}$ -in.	$\frac{5}{8}$ -in.	$\frac{3}{4}$ -in.	$\frac{7}{8}$ -in.	1-in.
Manila	\$0 01	\$0 01 $\frac{3}{4}$	\$0 03	\$0 05 $\frac{1}{4}$	\$0 06 $\frac{3}{4}$	\$0 09	\$0 11
Sisal	00 $\frac{3}{4}$	01 $\frac{1}{2}$	02 $\frac{1}{4}$	03 $\frac{3}{4}$	04 $\frac{1}{2}$	06 $\frac{1}{4}$	07 $\frac{1}{2}$



This tag guarantees each coil of "Blue Heart" Manila Rope

We carry many lines of goods that are not listed in this catalogue, and for this reason invite correspondence regarding the wants of our customers. If we cannot furnish the article inquired for, we will endeavor to inform the inquirer where it can be had.



Three-Quarter Rear View of Binder. Supplied in 6, 7, and 8-foot cuts

Avery's Champion Binder by any other name would still be the Champion Binder, for it has to its credit an unmatched record for durability, for easy pulling, and for getting the grain. Its championship has been challenged time after time, but this sturdy, engineered Binder, with its many special features, is still, after many generations, the Champion Binder—in name, in reputation, and in fact.

Relief Rake. Short, tangled, or lodged grain, or grain that is full of weeds and grass, has a tendency to get twisted around and start up the elevator head first, or to clog between the platform and the elevator, unless it is rapidly cleared away. The kicking motion of the Relief Rake straightens out the tangled grain so it reaches the elevator in proper condition. It keeps trash cleared away from the inner end of the platform and prevents trash and grain from accumulating on the inner end of the cutter bar and dragging through uncut grain. This insures cutting a clean swath the full width of the cutter bar.

Force Feed Elevators. The illustration shows a cross-section view of the Force-Feed Elevator in operation. Note that the upper elevator canvas runs over three rollers so arranged that the lower surface adjusts automatically to light or heavy grain. This arrangement insures a positive feeding of grain to the packers and also permits of running the canvas comparatively slack which greatly increases its length of service. Another big improvement in Binder construction is the roller between the upper end of the lower elevator and the binder deck. It insures a force feed of grain down into the binding attachment, which prevents loss from grain backing up against the end of the elevator and being carried down between the end of the elevator and the deck.

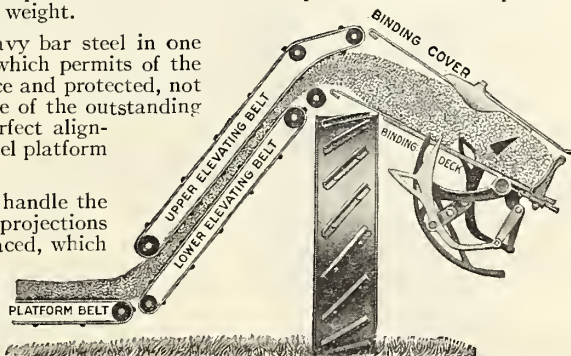
The Force-Feed Elevator is one of the exclusive Champion features. It combines all of the advantages and none of the disadvantages of both the floating and rigid types of elevators.

See cross-section view below showing how grain is fed to the packers.

Balancing Sectors. The Sectors which form the brackets of the main wheels are inclined forward at the top and curved to the rear at the bottom. This inclination of the Sectors moves the machine forward and back over the axle as it is raised and lowered. This keeps the machine perfectly counterbalanced at every height, whether it be tilted forward for cutting short, tangled or badly lodged grain, or raised for cutting tall grain. This perfect balance of the Champion insures easier operation of mechanical parts, less draft, and also relieves the team of neck weight.

Main Frame. The Main Frame is substantially made of heavy bar steel in one piece and is securely braced. It has two strong cross members which permits of the large bevel gear and knife crank-shaft being securely held in place and protected, not outside the frame as in other makes. Its remarkable rigidity is one of the outstanding features of the Champion, as it holds the working parts in perfect alignment under the severest strains incident to uneven ground. The steel platform is securely bolted to this frame.

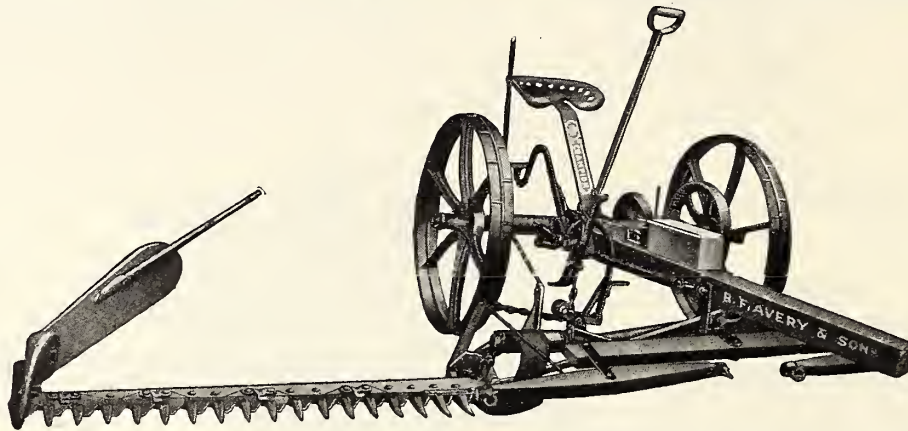
Platform and Cutter Bar. The platform is wide enough to handle the tallest grain. The bottom is of the smooth sheet steel with no projections to catch trash. The platform is made of bar steel and strongly braced, which eliminates the danger of the platform twisting out of shape or of the canvas rollers getting out of alignment. The cutter bar is a "Z" angle and effectively braced. It cannot twist, sag or spring out of line, which insures an easy, smooth-running knife. The guards have steel wearing plates and are exceptionally long lived; they can be easily removed and replaced.



Force Feed Elevator

SPECIAL CATALOGUE AND PRICES WILL BE SENT ON REQUEST

AVERY CHAMPION IMPROVED MOWERS



Avery Champion Standards. For many years the name Champion has stood for fine hay tools. For nearly a century the name Avery has stood for the highest type of shop and designing practice in the production of Avery farm machinery. Since the acquisition of Champion goods by Avery, every working part, every shop appliance, every manufacturing process has been made to conform, without compromise, to the standards which Avery has maintained since 1825. The Avery Champion Mower, with its outstanding features, is a notable example of the results which could naturally be expected from such a combination. It is the standard toward which all mowing-machines aim, but which Avery Champion alone attains.

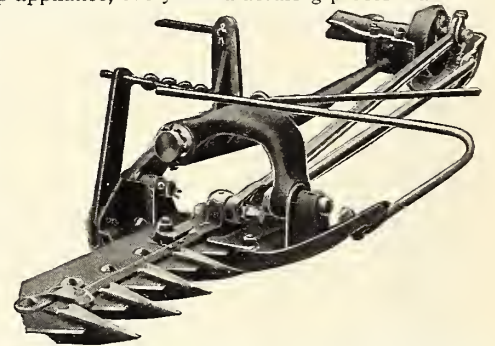
The Avery Champion Mower possesses many features of superiority. The draft-link is parallel to the pole; the malleable fly-wheel is removable and replaceable. The cutter bar is reinforced over its entire length. There is no part of an Avery Champion Mower that does not bespeak unusual excellence of design and manufacture.

One-Piece Steel Pitman. The One-Piece Steel Pitman on the Avery Champion Mower eliminates the greatest trouble to which mowing-machines have always been subject. There are no connections to come apart. There are no rivets to work loose. Shocks which would break a wood Pitman will simply bend an Avery Champion Pitman with no damage done that cannot be corrected on the spot. The section of the shaft, the special analysis of the steel, and the careful and scientific heat treatment all make for reliability, sturdiness, and permanence.

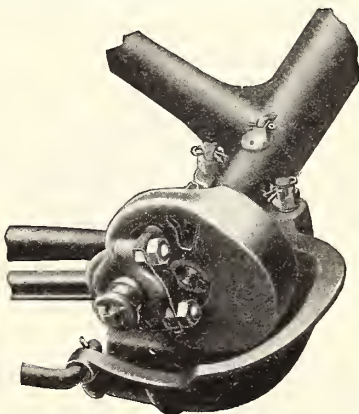
Every farmer knows that the elimination of the Pitman trouble does away with the bulk of the difficulties that are to be experienced with mowing-machines. The Avery Champion One-Piece Steel Pitman eliminates Pitman trouble of all kinds and simplifies in many ways the more serious problems of the hay farmer.

Drop Forged Knife Head. The extra-long Drop Heat-treated Steel Knife Head is hard and wear-resisting at the points where it is subject to extreme friction and tough and strong where it is subject to breaking strains. It is long-wearing and practically unbreakable, a saver of time, trouble, and money.

Closed End Bearing. The Closed End Bearing at the fly-wheel of the Pitman is an important feature of Avery Champion superiority for two reasons. First, due to the fact that it is confined at the inner end instead of the outer end, the normal tendency to bind is almost entirely eliminated. Second, due to the closed end of thimble construction and to the natural slanting position of the crank-pin, the tendency to lose oil is done away with. The net result, therefore, is perfect alignment at all times and a bearing which works without binding and does not overheat.



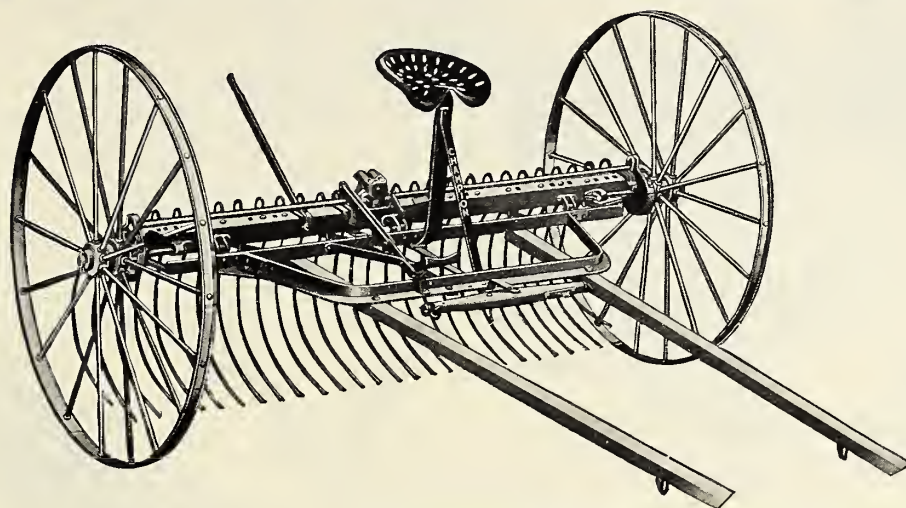
Sectional view showing the self-adjusting pitman and knife head connection and the wide, substantial coupling yoke which holds the cutter bar in perfect alignment.



Description	Weight
4½-ft. Regular Lift.....	726 lbs.
5-ft. Regular Lift.....	731 lbs.
4½-ft. Vertical Lift.....	735 lbs.
5-ft. Vertical Lift.....	740 lbs.
4½-ft. Big Frame, Regular Lift.....	793 lbs.
5-ft. Big Frame Regular Lift.....	798 lbs.
6-ft. Big Frame Regular Lift.....	815 lbs.
7-ft. Big Frame Regular Lift.....	825 lbs.
3½-ft. One-Horse Vertical Lift.....	540 lbs.

ASK FOR SPECIAL CATALOGUE AND PRICES

AVERY CHAMPION IMPROVED SELF-DUMP RAKES



This illustration shows the teeth lowered in raking position with the seat standards removed in order to show the trussed bridge-like construction of the angle-steel frame and the simplicity of the dumping device. This view also shows to good advantage the effective arrangement of leverage in the locking device, a slight pressure of the foot on the pedal serving to hold the teeth in raking position against all ordinary working pressure in the heaviest grasses.

in raking position until the trip lever or the dumping device is released by the operator. The locking lever does not extend below the frame to catch in the hay and interfere with the clearance of the teeth in dumping. This relieves the operator of holding the teeth down when working in unusually heavy hay. No matter how heavy the load, the Rake will not dump until the trip lever is released.

The change from one to two-horse operation can be quickly made by bolting the thills together, using the singletree as an extension to form the tongue.

Teeth. Teeth are of oil-tempered spring steel and attached to the rake-head by malleable lips. $\frac{3}{8}$ -inch single-coil Teeth are regular equipment. Can also furnish $\frac{1}{2}$ -inch single-coil Teeth or with either $\frac{3}{8}$ or $\frac{1}{2}$ -inch double coil Teeth.

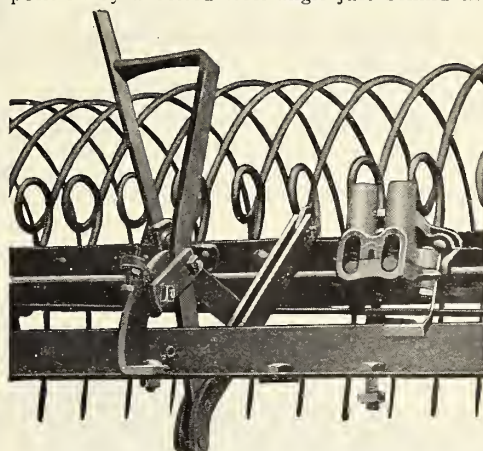
Description	Weight
8 ft., 20 Teeth.....	375 lbs.
8 ft., 26 Teeth.....	385 lbs.
9 ft., 24 Teeth.....	410 lbs.
9 ft., 30 Teeth.....	420 lbs.
10 ft., 26 Teeth.....	425 lbs.
10 ft., 32 Teeth.....	445 lbs.
12 ft., 32 Teeth.....	475 lbs.
12 ft., 40 Teeth.....	495 lbs.

Notable improvements in both the structural and mechanical features of the Champion Self-Dump Rake have placed it far in advance of similar implements for durability, ease of action, and effective operation in the field. The frame is made of steel angles, braced and trussed in a bridge-like construction that will not twist under severest working conditions.

Large substantial wheels with staggered spokes provide ample traction and strength to insure smooth operation in the heaviest grasses. The stub axles are reversible, giving double the normal amount of service at the wheel boxes.

The new dumping device on the Champion Self-Dump Rake is simplicity itself. It is small and compact, with the fewest possible working parts, and absolutely positive in action. Short, powerful coil-springs, acting directly upon the ends of the dumping-rods, afford instant engagement of the pawls in the wheel ratchets and insure positive and continued connection at these points until the dumping action is completed and the trip automatically released. The new device has no complicated mechanism to get out of order and delay work. The cleaner teeth are of flat machinery steel, attached to the cleaner angle with machine and hook bolts. They are held in position by a bolted steel angle just behind the rake-head, no part of this construction to break or work loose.

A simple arrangement of leverage holds the teeth down in



This illustration shows the teeth raised into the dumping position. The angle from which this photograph was taken makes it appear that the foot-lever of the locking device extends below the thill frame, which is not the case. There are no parts that project below the frame to catch and accumulate hay or otherwise interfere with the perfect clearance of the teeth when dumping.

ASK FOR SPECIAL CATALOGUE AND PRICES

Moline Side-Delivery Rake and Tedder

Its left-hand delivery enables the Moline Side-Delivery Rake and Tedder to follow the mower in the same direction, working against the heads of the hay and placing it on the clean stubble. The airy windrows, with the heads in and butts out, air-cures with the minimum bleach and loss of nutritive value. Hay cured the Moline way retains its natural color and is an air-cured product of high market and feeding value.

In addition to its value as a Rake, the Moline Side-Delivery Rake and Tedder goes further and provides an excellent Tedder, into which it is quickly converted by simply moving one lever which shifts the gears. This tedding feature makes it possible to cure large masses of hay when it is damp.

The three cylinder bars are supported in the center by a steel spider and are arranged spirally on the shaft, which causes the teeth to pick up the hay in a smooth, continuous motion instead of sudden jerks, as with the flat type bar of construction. The height of the cylinder may be raised or lowered.

The teeth are closely spaced and sweep the stubble clean.

The power is applied from both sides of the Rake by the two drive wheels, equipped with lugs that give good traction under all conditions. The main wheels have roller bearings, giving very light draft.

Ask for special circular and price

Moline Hay Loader No. 2

The Moline Hay Loader will handle the lightest swath or heavy windrow. Its large capacity enables it to take care of the heavy crop as well as the medium or light one.

The rakes sweep the ground in long, steady, easy strokes and gather up the hay without breaking the stems or shattering the leaves. The hay is always handled without beating or threshing. The Moline Hay Loader saves the foliage.

The rake-bars are driven by means of pitmans and cranks directly from the main axle. The motion produced is slow, very steady, and uniform to a degree unequaled by any other mechanism on the market. Short, choppy strokes, so destructive of foliage, are entirely eliminated by this construction.

This simple driving device eliminates the use of gears, sprockets, chains, or rope webs, thus avoiding all the trouble and delay from breakage which such parts are bound to cause, and the loader will give longer and better service.

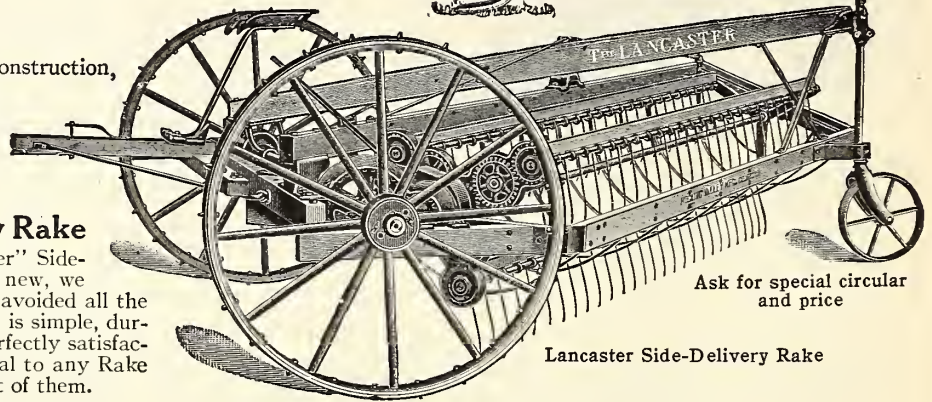
CONSTRUCTION

The Moline Loader is of all steel construction, which increases its strength and durability yet saves in weight, and makes the machine more easy to handle. Materials and workmanship are of the best.

Ask for special circular and price

The Lancaster Side-Delivery Rake

In the construction of the "Lancaster" Side-Delivery Rake, which is comparatively new, we have combined all the good points, and avoided all the faults of those that have gone before. It is simple, durable, well made, easily operated, and perfectly satisfactory in its work. In capacity, it is equal to any Rake of the kind made, and greater than most of them.

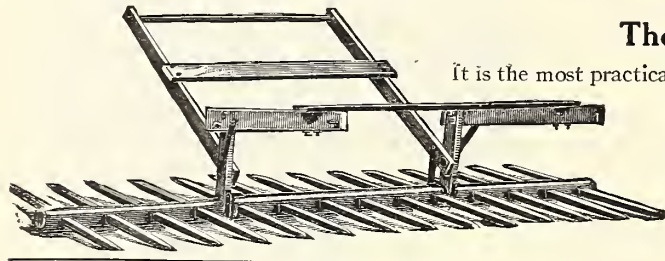


Ask for special circular and price

Lancaster Side-Delivery Rake

The Huber Revolving Hay-Rake

It is the most practical Rake in use, and is made of the best selected hardwood timber thoroughly seasoned. The teeth are square and are framed in the heads perfectly solid, thus giving them more strength and making them less liable to come loose and break, and enabling them to gather the hay better than a round-tooth Rake. Leaves the hay in better shape for pitching and building than any other style of Rake. 8-ft., 14 teeth \$13.50; 9-ft., 16 teeth, \$14.50.



Bale Ties

We make a specialty of furnishing Steel Wire Hay Bale Ties for baling hay, straw, waste paper, etc., to suit all the different sizes and styles of balers. We carry in stock at Pittsburgh for quick shipment the leading sizes of cross-head and single-loop ties and can also make prompt shipments direct from factory. Prices will be quoted on request.



Cross-Head



Single-Loop

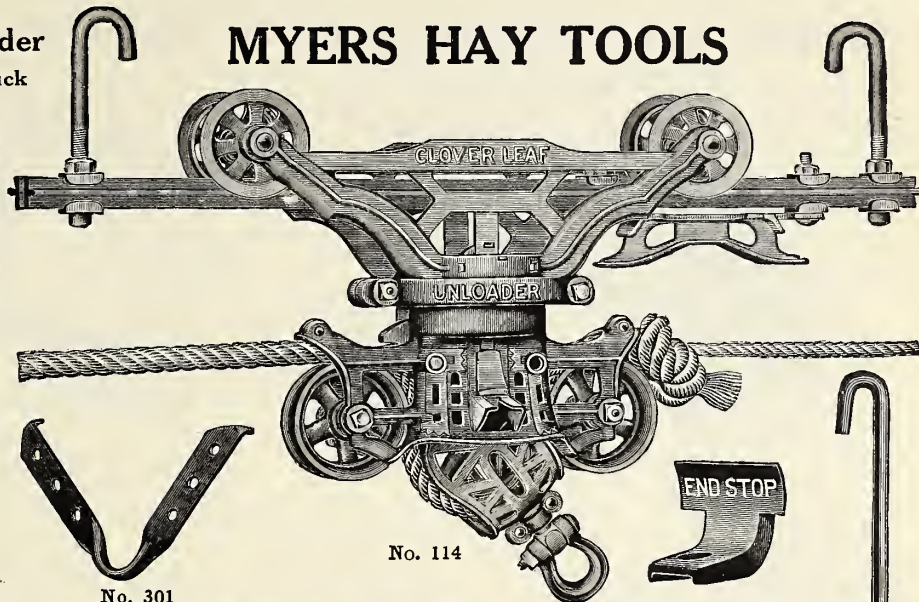
Myers Clover Leaf Unloader

Swivel and Reversible 16-inch Truck
for Double Steel Track

The Myers Clover Leaf Unloader is built of malleable iron throughout. It is heavy and substantially made. Trucks are 16 inches long. Track wheels are large and revolve on $\frac{3}{8}$ -inch turned steel axles. Lock is composed of three parts and has no springs. This Unloader has wide-open mouth to receive fork pulley when swinging at any angle. Rope sheaves have longer hub than other Unloaders. Knockers and end stop furnished with each Unloader.

PRICES

- No. 114. Unloader. Complete as described above..... \$9 25
No. 824. Double Steel Track, as illustrated. Per foot..... 23
No. 301. Steel Rafter Brackets, as illustrated. Each..... 06
No. 302. Steel Track Hanging Hooks, as illustrated. Each.. 18
No. 266. $\frac{3}{4}$ -inch Floor Hooks. Each..... 18



Myers Hay Forks

No. 268. Myers Double Harpoon Fork is constructed of heavy material. It is well riveted and has 25-inch steel tines, nicely sharpened. \$3 each.

No. 773. Nellis Fork is constructed of extra-quality material throughout. This Fork is nicely finished. Point is sharp as shown in illustration. \$4.50 ea.

Myers Pulleys

No. 1120. Has 6-inch wood sheave, 1-inch loose pin, swivel eye. Frame is made in two

halves, riveted together. Axle is $1\frac{1}{8}$ inches. 65c. ea.
No. 1267. Has cast frame, 6-inch wood sheave, $1\frac{1}{4}$ -inch pin. Neat design. Different from the ordinary plain Pulley. 55 cts. each.

No. 692. All Cast Iron Pulley. Sheave is $5\frac{1}{2}$ inches with solid axle. 50 cts. each.

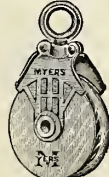
No. 434. Reed Wood Frame Pulley. Has 1-in. loose pin, self-lubricating wood sheave, with steel hook. 65c. ea.

No. 466. Not illustrated. Same as No. 434, with Swivel Eye. 65c.

No. 1124. Has malleable iron frame extending around the entire surface of the sheave. Frame is made in two separate pieces riveted together at the swivel eye; has malleable iron clevis and steel bolt; has iron sheave. Is especially designed for rough usage. \$1.25 each.



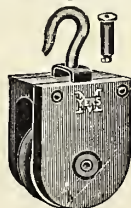
No. 1120



No. 1267



No. 692



No. 434



No. 773

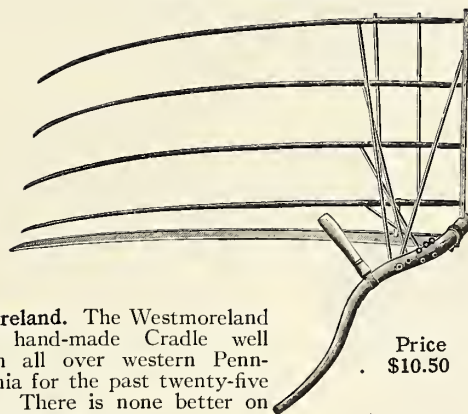


No. 824



No. 302

Grain Cradles

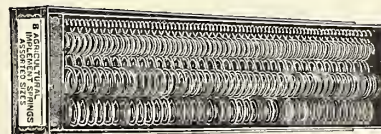


Price
\$10.50

Westmoreland. The Westmoreland is a hand-made Cradle well known all over western Pennsylvania for the past twenty-five years. There is none better on the market. \$10.50.

- Genuine Schwob. Machine-made cradle, 4-finger.....\$7 00
Extra Fingers, hand-made..... 40
Extra Fingers, oil-sprung..... 25

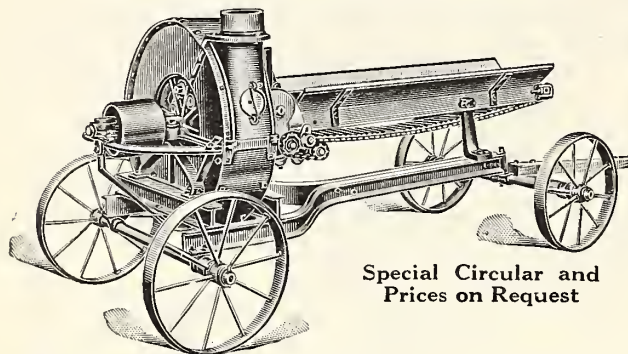
Agricultural Implement Spring Assortment



Box of 8 springs, of different diameters and sizes wire, each 12 inches long, which can be cut to desired lengths. Contains sizes suitable for almost all kinds of agricultural implements. This handy box of springs on your work-bench may save days of idleness in your farming equipment. Price 50 cts., postpaid 60c.

Hocking Valley Silo Filler and Fodder Cutter

Made with 9-, 11-, 13-, and 15-inch throat, Self-feed Table and Silage Deflector, mounted and unmounted



Special Circular and Prices on Request

This Blower is so compact, so simple in construction and so free from machinery and complicated parts that its merits are recognized on sight. Excepting the ground sill it is made entirely of metal. It consists simply of a heavy iron disc or balance wheel to which are attached the knives and fan blades, and these are enclosed in a circular iron drum or case. These with the feed-rollers and main shaft on which the balance wheel revolves, constitute practically the whole machine.

The manner of attaching the knives to the balance wheel calls for special attention. They do not shear, as in other similar cutters, from the inner end toward the outer end of the shear bar. On the contrary, the knives are so set that they first meet the shear bar at its outer end, where the momentum is greatest and where the work is hardest and shear toward the inner end, as the momentum diminishes and the work decreases. The importance of this construction in saving of power cannot be overestimated. We furnish two knives regularly, but four may be used at an extra cost of the two knives.

Wilson Dustite Respirator No. 2

Breathing Dust and Spray Brings Sickness and Shorter Life

SAVE YOUR LUNGS

Don't ruin your health. Protect your nose, mouth, throat, and lungs.

Farmers wear this Respirator for threshing, tractor work, cleaning buildings, spreading fertilizers, handling crops, treating wheat for smut, using powders for cereal diseases, painting, and for spraying and dusting trees and plants. Price \$2.25, postpaid.



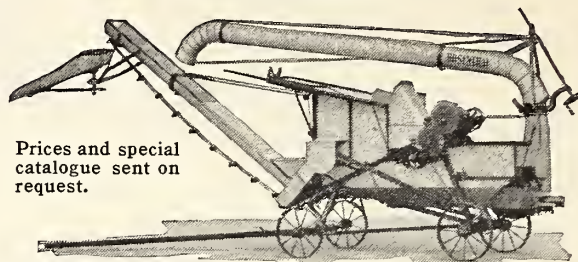
SPECIAL CATALOGUES

Special catalogue and prices of the following lines not shown in this catalogue will be sent on request.

**Ann Arbor Hay-Presses
Farquhar Threshers and Saw-Mills
Martin Corn-Cribs
Feed Cookers**

Regardless of what you want in the line of Farm Machinery, write us before buying.

Rosenthal Corn-Huskers and Shredders



Prices and special catalogue sent on request.

Rosenthal Steel "4". Capacity, 500-700 bushels a day. Easily powered by 9-18 or 10-20 H.P. tractor

MADE IN FIVE SIZES

Rated daily capacities in bushels:

No. 1, 200-400; Special "4", 300-500; Steel "4", 500-700; Medium "4", 400-800; Big "8", 700-1,500.

Built By the Pioneers

Back in 1889, August Rosenthal perfected the first mechanical Corn-Husker and Shredder on his father's farm at Reedsburg, Wis. For seven years, August had toiled with model after model. His first machine was powered by "Prince," the old Rosenthal plow-horse.

News of its success flashed through the countryside. His determination and the encouragement of neighbors led to further experimentation and development which ended in him and his brothers establishing a factory and devoting his entire time to the Corn-Husker business.

The Rosenthal Steel "4," announced in 1925, is the latest Rosenthal achievement. It embodies every famous Rosenthal feature. Its capacity fits the needs of the greatest number of farmers.

SIMPLE CONSTRUCTION

Simple, rugged construction has always been the keynote of all Rosenthal Huskers. All Steel "4" transmission gears are of steel and are enclosed in a solid housing and constantly operate in gear-grease.

CLEAN HUSKING WITH STALKS DRY, WET OR FROZEN HARD

Every Rosenthal owner marvels at how these machines continue on, hour after hour, husking clean regardless of the condition of stalks.

SAFE TO OPERATE—NATURAL SELF-FEEDER

With all Rosenthal Huskers, the feeder stands in front, facing the machine. Bundles may be thrown on the table from either side. No spreading of bundles necessary. The feeder simply cuts the bands and lets the bundles slide down into the snapping portion of the rollers. This method of gravity feed has proven the only practical way of feeding corn-stalks into the machine under all conditions, and with safety.

EASY TO MOVE

The Steel "4" weighs 3,225 pounds—an easy haul for the same tractor that furnishes belt power. The corn-carrier is hinged and the upper part folds under, making a compact outfit for the road.

EASY TO OIL

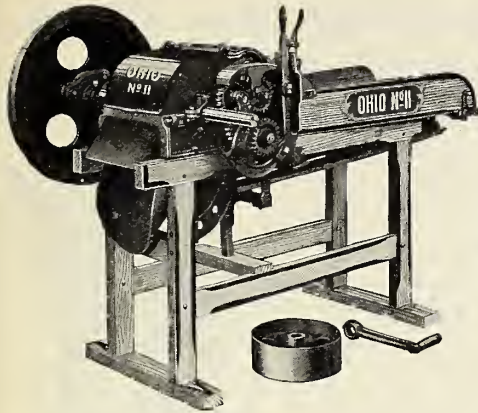
All boxes and bearings may be oiled from outside while machine is running. All main bearings and also the truck wheels are conveniently equipped with grease-cups.

Ask for Special Catalogue describing these and other important features in full detail. Prices quoted on request.



The Rosenthal Husker and Shredder of 1894. Drawing from actual photograph taken on Rosenthal farm, Reedsburg, Wis.

Silver "Ohio" Standard Feed and Ensilage Cutter No. 11 S



The Silver "Ohio" No. 11 S Cutters are powerful machines and are noted for their strength, durability, large capacity, fine workmanship, quality of materials used, satisfactory operation, and the fine quality of feed they produce. They are used for cutting all kinds of dry or green roughage, corn-stalks, hay, straw, clover, etc. They can also be equipped with carrier elevator for filling silos where only light power is available.

They have patented feeding device and throw-out lever, heavy well-balanced safety flywheel. Frame is mortised, tenoned, and pinned. Has wide and well-babbitted bearings. Knives are carefully tempered, high-carbon tool steel and are mounted on our new, curved, sliding knife-blocks for accurate adjustment.

Capacity, 2,500 to 3,000 pounds dry feed per hour and 3 to 4 tons per hour on ensilage.

Power required, 2 to 4 H.P. gas.

Pulley, choice of 6-, 8-, 10-, 12-, or 14- by 4-inch face.

Length of cut, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, and 1 inch with four knives; double these lengths with two knives.

Weight, 440 pounds.

Shredder blades can be furnished at slight additional cost.

Price complete, with four knives.....	\$61 00
Shredder Blades, each.....	3 00
12-foot Reversible Elevator.....	43 00
12-foot Straight Delivery Elevator.....	39 00
Extra Elevator, either style, per foot.....	2 10

The "Ohio" No. 8½ Feed-Cutter

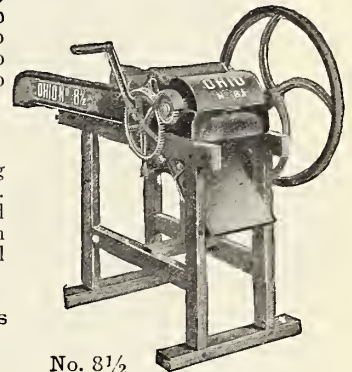
The No. 8½ is an excellent Cutter for anyone needing a small, easy-running machine for cutting all kinds of dry or green food for one or a few head of stock. It is well built and reasonably priced. The feed box is 38 inches long and has 25-inch fly-wheel. The framework is of good hardwood mortised, tenoned, and pinned. Has high carbon steel knives, mounted on knife heads with sliding block for quick, accurate adjustment. The cutter bar is chilled iron and the patented feeding gears and rolls work automatically whether one stalk or an armful is being fed.

Capacity. Cuts one bushel of hay in thirty to forty seconds.

Length of Cut. Cuts $\frac{1}{4}$ -, $\frac{1}{2}$ -, $\frac{3}{4}$ -, and 1-inch lengths with two knives or double these lengths with one knife.

Pulley for Power. Choice of 8- or 10 x 3-inch pulley can be supplied.

Weight 175 pounds. With 2 knives, \$32; Pulley \$1.50 extra. Other sizes quoted on request

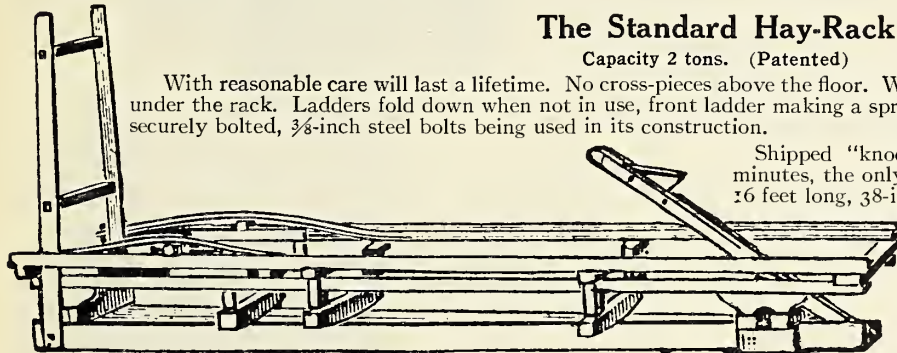


No. 8½

The Standard Hay-Rack

Capacity 2 tons. (Patented)

With reasonable care will last a lifetime. No cross-pieces above the floor. Wagon can turn short, front wheels turning under the rack. Ladders fold down when not in use, front ladder making a spring seat. Material, clear Washington Fir securely bolted, $\frac{3}{8}$ -inch steel bolts being used in its construction.



Shipped "knocked down." Can be set up in thirty minutes, the only tool required being a wrench.

26 feet long, 38-inch bolster.....\$35 00

16 feet long, 42-inch bolster.... 38 00

Furnished at the above prices to fit

either 38- or 42-inch bolsters. In order-

ing be careful to state width of bolsters.

We solicit early orders for Racks as we often run short in harvest-time.

H. & A. "Star Brand" Binder Twine

We have always made a specialty of furnishing our customers with high-grade Binder Twine. We will not handle Twine about which there is the least suspicion of shortage in length, poor material, or workmanship.

"Star Brand" Twine is evenly spun from the best fibers, is of full yardage and strength, and is used from coast to coast by farmers who claim it is never cut by insects.

You buy your twine by the pound but you use it by the foot. You must see to it therefore that you get the length you are paying for.

H. & A. "Star Brand" Binder Twine is guaranteed to have the yardage claimed for it, to have ample strength for binding purposes, and to work satisfactorily in any properly adjusted binder.

We furnish the following:

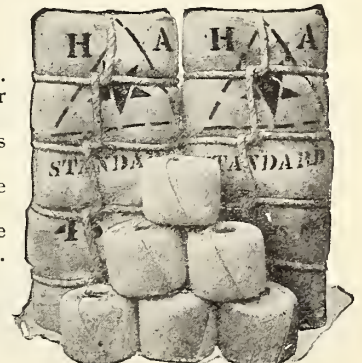
Sisal. 500 feet to the pound.

Standard. 500 feet to the pound.

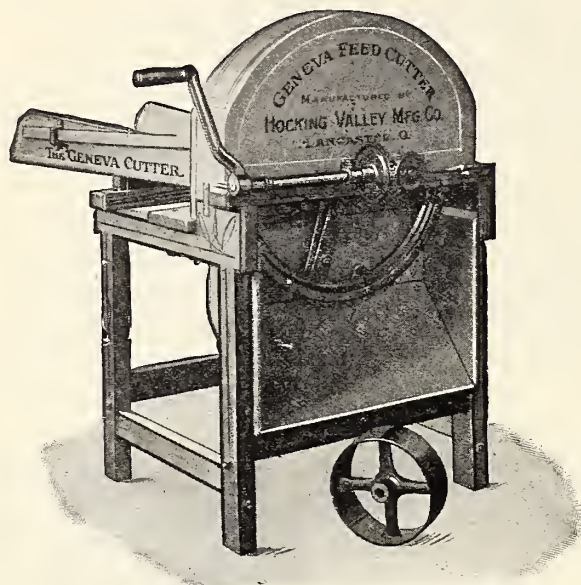
Manila. 600 feet to the pound.

Manila. 650 feet to the pound.

Write for prices specifying quantity wanted



The Geneva Feed-Cutter



The Geneva Feed-Cutter has been added to our line of feed-cutting machines for those who prefer one with the knives on the balance wheel. The knives are straight and flat, and of the best quality, easily adjustable to the shear bar, and can be removed, ground and replaced with the utmost ease. It has patent triangular frame, giving it a firm foundation on any surface.

No. 6. Has two 9-inch knives and is intended for hand use only. It cuts five different lengths, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, and $1\frac{1}{4}$ inches, and the change can be made in a moment. \$41.

No. 8. Has two 10-inch knives and is also intended for hand use only. It cuts five different lengths, same as No. 6. It is a very desirable hand machine. \$44.75.

No. 10. Has two 10-inch knives and is intended for both hand and power. It cuts five different lengths, same as No. 6 and No. 8. The gearing is covered to prevent accidents, and is provided with a lever, which not only throws it in and out of gear but reverses the motion of the rollers, when desired. With crank attachment and pulley, \$52.75.

No. 12. Has two 13-inch knives and is intended for both hand and power. It cuts six different lengths, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, 1, and $1\frac{1}{4}$ inches. It has its gearing protected, and also has a lever for controlling the rollers, by means of which they can be stopped, or made to be revolved forward or backward at will. With crank attachment and pulley, \$63.50.

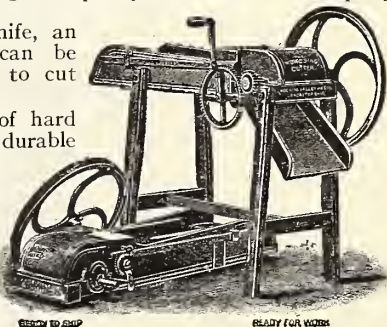
The Kokosing Feed-Cutter

A hand machine that is cheap, strong, durable, well finished, and at the same time has good capacity and does its work rapidly and with ease.

It has an 11-inch knife, an automatic feed, and can be changed in a moment to cut various lengths.

It is made entirely of hard wood, and is the most durable Cutter of the kind ever made.

All things considered, it is the cheapest hand Feed-Cutter ever offered to the trade. \$28.50; with belt wheel, \$30.75.

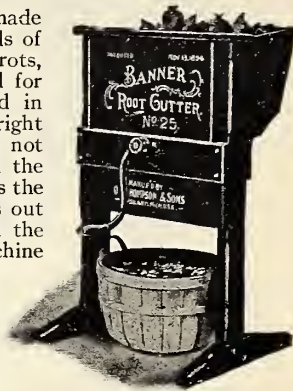


Thompson's Banner Root Cutters

FOR CUTTING ALL KINDS OF ROOTS
AND VEGETABLES FOR STOCK FEEDERS

No. 25

For hand use. This machine is made for cutting and preparing all kinds of roots, like beets, turnips, carrots, potatoes, and pumpkins into feed for cattle and hogs, leaving the feed in long, half-round slices, just the right size, so the cattle and hogs will not choke. It has a shaking grate in the bottom that works up and down as the machine is turned, and this takes out the dirt so it will not go in with the feed, and it also makes the machine feed faster. The up- and down-motion of this grate is regulated by a cam which can be moved forward or back on the shaft by loosening a set-screw, and in this way it can be adjusted to agree with the size of the roots that are to be cut. Price \$14.



No. 25



No. 20

No. 20. The popular Cutter for all ordinary requirements where hand power is used. Capacity 30 to 50 bushels per hour; weight, about 125 pounds. \$15; extra knives \$2.50 per set.

No. 16 is supplied with balance wheel, pulley, and crank, so it can be used by power or hand as desired. It is considerably larger than the No. 20; weight about 150 pounds. Complete, pulley and crank, \$24; extra knives \$2.50 per set.

No. 10. (Not illustrated.) Exclusively for power, capacity 4 to 6 bushels per minute. Just the machine for large feeders who drive machinery by power. This is a large, strong machine; weight about 300 lbs. Complete, for power use, \$33; extra knives \$3.25 per set.



No. 16

For description and prices of "Banner Root Cutters for Poultry," see page 173

BOWSHER GRINDING MILLS

WRITE FOR SPECIAL
CATALOGUE

These machines represent the highest achievement in practical feed mill construction. Their convenience and simplicity of operation, wide range of usefulness, durability of construction, and beauty of design place them preëminently in a class by themselves. Nothing has been spared in the construction of Bowsher's "Combination" mills to make them thoroughly efficient "general purpose" grinders.

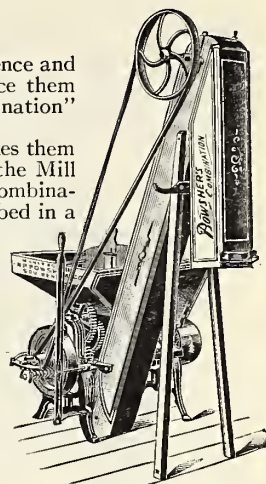
Aside from the high class of workmanship characterized throughout the Mills, the feature that makes them unique among grinders is the peculiar type of cone-shaped grinding plates employed, which secure for the Mill many advantages in the way of light running qualities, large capacity, and economy of operation. The "Combination" Mills are manufactured in eleven sizes, for use with from 2 to 25 horse-power, and are fully described in a special circular which will be mailed on request. Suitable "sacking" or "wagon-box" elevators furnished for all sizes when desired.

Size No. 8. The No. 8, shown here with elevator, incorporates all the advantages peculiar to the "Combination" line: The cone-shaped grinders, which present a larger grinding surface close to the center of the shaft and run empty without injuring themselves; the wooden relief lever, by which the grinders may be instantly thrown wide apart to prevent choke-up or eliminate foreign substance; perfect lubrication of all bearings; positive feed for ear corn; and the divided hopper which handles ear corn, with or without the shuck, and any kind of small grain at the same time, crushing, grinding and mixing the two together perfectly in any proportion desired. Power required, 10 to 15 horse-power. Without elevator, \$120; with 4-in. elevator, \$148.

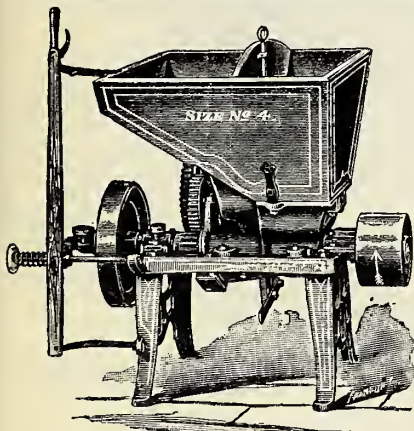
Size No. 4. This Mill is constructed on practically the same principle as the No. 8, the size representing the chief difference. It is equipped with the cone-shaped grinders, the wooden relief lever, has positive feed for ear corn, divided hopper, etc. This machine will handle successfully ear corn, with or without the shuck, and all kinds of small grain. Has perfect regulation for coarse or fine grinding, and the burs may be allowed to run empty without injury. Power required, 6 to 10 horse-power. Without elevator, \$80; with 4-in. elevator, \$108.

Size No. 0. This is the smallest Mill in the "Combination" line, but presents a high type of workmanship and construction rarely to be found in Mills suitable for very small powers. It will feed itself on ear corn and handle any kind of small grain satisfactorily. The hopper is all in one, but is sufficiently wide and long. It is equipped with the cone-shaped grinders, the wooden relief lever, and many other advantages of the larger sizes. Power required, 2 to 4 horse-power. Without elevator, \$36; with 3-in. short elevator, \$51.

For description and prices of smaller Mills, see pages 174 and 175

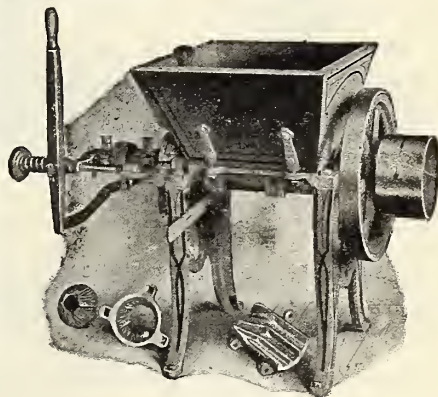


No. 8

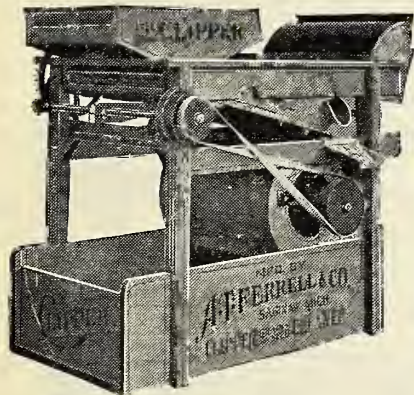


No. 4

that ear corn may be shoveled into it. It is equipped with the cone-shaped grinders, the wooden relief lever, and many other advantages of the larger sizes. Power required, 2 to 4 horse-power. Without elevator, \$36; with 3-in. short elevator, \$51.



No. 0



The No. 1-B Clipper Seed Cleaner

Clipper Grain and Seed Cleaner

The Clipper has no worthy competitor. It is used by seedsmen almost exclusively. No other Cleaner cleans so clean—none other sells so cheap. It will last a lifetime and earn its cost every year it is used on a well conducted farm.

The Clipper screen outfit is very complete for the work required and contains screens for wheat, oats, barley, rye, red and alsike clovers, alfalfa, sweet clover, timothy, millet, flax, peas, beans, cowpeas, soy beans, grading seed corn, cleaning clover containing buckhorn, plantain or ripple, cleaning timothy seed containing pepper grass and sorrel, also cane seed, milo maize, kaffir corn and separating corn from oats.

The vertical air blast of the Clipper is a feature that no other Cleaner has, and it makes possible the most difficult separations that can be made in no other way. For instance, in cleaning seed grain, if the belt is properly adjusted on the pulleys, so as to get the correct speed of the fan and if the turning is regular, you can remove the light grains from the heavy, to the extent that the weight of the grain being cleaned can be raised from 3 to 5 pounds per bushel.

No. 1-B Clipper is a farm-size hand-mill that will clean 20 bushels of seed wheat per hour, or 10 bushels of clover or timothy seed per hour. Dimensions: Length, 4 feet 8 inches; width, 2 feet 2 inches; height, 3 feet 8 inches; weight, crated, 185 pounds.

Twelve screens, 19 inches wide and 22¼ inches long, go with the No. 1-B Mill, an outfit suitable for cleaning seed wheat, rye, oats, corn, barley, peas, beans, clover, timothy seed, other grass seed, garden and vegetable seeds.

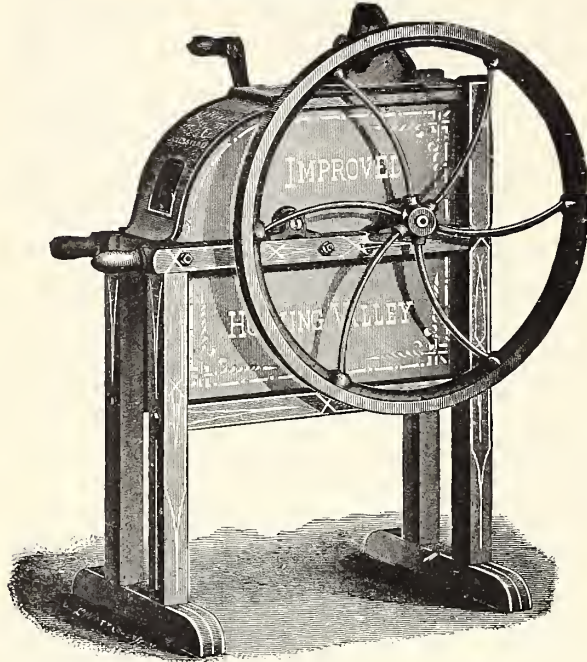
Plain directions for separating go with each Mill. These are so easily understood that anyone can learn in a few minutes how to make the most delicate separations. \$38.

The No. 2-B Clipper does exactly the same work as the No. 1-B. Its capacity per hour is 25 bushels grain and 15 bushels of grass seed. The screens (12 in number) are 6 inches wider than the No. 1-B screens. Dimensions of No. 2-B are 4 feet 8 inches long, 2 feet 8 inches wide, 3 feet 8 inches high; crated weight, 210 pounds. No. 2-B can be run easily by hand for cleaning grass seed, but for cleaning grain some kind of power should be applied—½ horse-power is sufficient. \$48.

Power Pulley, 6-in. diam., for either size, \$1 extra.

Hocking Valley Corn Shellers

ONE-HOLE SHELLER



The Hocking Valley One-Hole Sheller is the standard Sheller with which all others are compared. It fully deserves all its popularity. It is carefully made of the best material that can be gotten, and is always perfectly satisfactory in its working. It is furnished either with or without fan, feed-table, and pulley, and has a capacity of from 20 to 25 bushels an hour.

PRICES

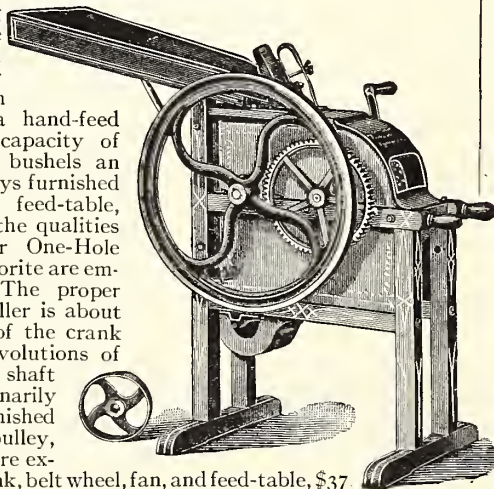
With fan.....	\$17 25	Feed-table, extra.....	\$1 25
Without fan.....	15 50	Clamp pulley, extra.....	1 25

Two-Hole Sheller

The Hocking Valley Two-Hole Sheller is intended to be used either by hand or with power. It is a hand-feed Sheller with a capacity of about 35 to 40 bushels an hour, and is always furnished with crank, fan, feed-table, and pulley. All the qualities which make our One-Hole Sheller such a favorite are embodied in it. The proper speed of the Sheller is about 100 revolutions of the crank shaft, or 300 revolutions of the balance wheel shaft a minute. As ordinarily sent out, it is furnished with an 8-inch pulley, and both shafts are extended. With crank, belt wheel, fan, and feed-table, \$37.

Black Hawk Corn-Sheller

The Black Hawk Corn-Sheller has enclosed hopper and separator. This prevents scattering of the shelled corn. A wonderfully fast and easy running Sheller. Instantly fastened to barrel or box by two large strong clamps with wing nuts. For illustration, see page 175. Price \$3.25; postpaid \$3.65.



Hocking Valley Cider Mills

In Hocking Valley Cider Mills we adapt the principle of large hydraulic presses to a hand mill. The grinding device consists of a hardwood cylinder, revolving rapidly, with serrated steel knives running lengthwise, which break down the juice cells and make a pomace that yields under the press every particle of juice in the fruit. A quart of water will clean it after using. An important feature of the Mills is the absence of metal of any kind to rust and impair the quality of the cider. We guarantee them to be entirely satisfactory in every respect, in execution, ease of operation, capacity, in durability and finish.



IN HANDLING GRAPES

Hocking Valley Cider Mills are equally well adapted for the handling of grapes. This is due to their construction in which the grating principle is employed instead of crushing. This is the only type of cider mill that is adapted to the grinding of grapes before pressing.

This process gets all the juice out of hull and pith, does not break the seeds and insures a full-flavored product. Easily adjustable for other fruits and berries.

Bantam Mill. 1 tub...	\$22 00	Senior Mill. 2 tubs....	\$52 00
Junior Mill. 2 tubs....	32 00	Power Pulley, extra....	2 25
Medium Mill. 2 tubs..	39 00		

Power pulley can be furnished for all Mills except the Bantam.

Hocking Valley Junior Fruit Grinder

The Junior Fruit Grinder consists of the hopper, gearing, and grinding apparatus of our Junior cider mill, mounted on a square frame, without the screw, press, and other parts. It is intended to stand on a barrel, box, or other suitable receptacle for the ground pomace. It is admirably adapted for grinding all kinds of fruits and berries and can be used in place of a cider mill provided no pressing is necessary. Price, with 6-inch extension hopper, \$16.

The Hocking Valley Fruit-Press

Is constructed of strictly high-grade hardwood lumber, is thoroughly well made and handsomely finished.

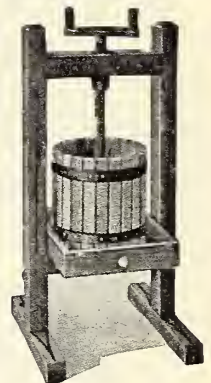
No. 1. This has a 1-inch screw, and the crate or tub is 10½ inches high and 8½ inches in diameter. Its capacity of course is limited, but evidently sufficient to meet the wants of a good many, as we have a generous trade on it. \$9.50.

No. 2. This size has a 1¼-inch screw, and the crate or tub is 11¼ inches high and 10 inches in diameter. This is the size preferred for general family use and most in demand. \$12.50.

No. 3. This size has a 1½-inch screw, and the crate or tub is 12¾ inches high and 12¾ inches in diameter. It is used where greater capacity is wanted. \$15.

No. 6. A press of large capacity, designed for the handling of great quantities of fruit. It is equipped with 1¾-inch screw, and the tub is 14¼ inches high and 15¼ inches in diameter. Made with heavy iron crosshead. Price, with hinged tub, \$20.

Special circular on Cider Mills and Fruit-Presses on request



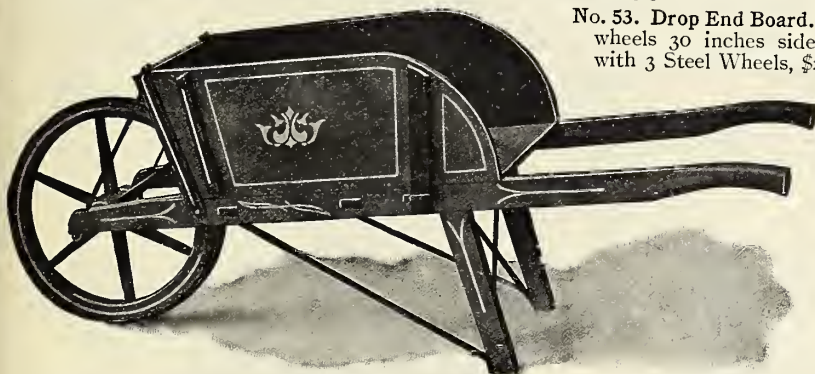
The Monitor Hand Cart

Needs no introduction to the trade in general, having been on the market and the STANDARD for the past thirty years

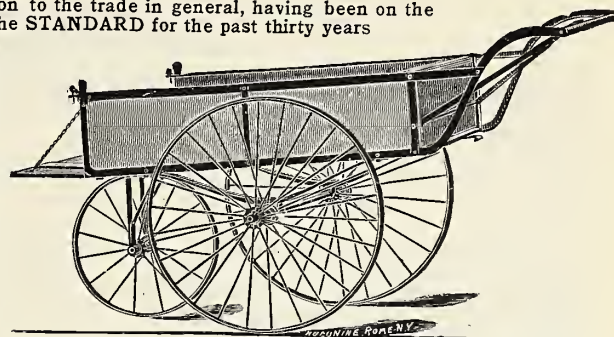
Uses. The uses to which these Carts are adapted are unlimited. They will pay for themselves in a short time in any manufacturing or mercantile business, and are indispensable to grocers, bakers, laundries, farmers, dairymen, gardeners, and for general family use. Where the Monitor has once been used there is no more use for the wheelbarrow or any other cart.

Construction. The frames of bodies are made of special carbon steel, riveted together with best Norway rivets. It is light and very strong, with durable first quality basswood box inside, and has fine oil tempered half elliptical springs (two- and three-leaf as required), and the wheels nicely painted.

No. 333. Drop End Board. Size inside of body, 39 x 24 inches; depth 9 1/2 inches; wheels 26 inches side, 14 inches front. Capacity, 350 pounds. Price, with 3 Steel Wheels, \$19.50; with Wood Wheels, \$23.50.



No. 53. Drop End Board. Size inside of body, 40 x 26 inches; depth, 9 1/2 inches; wheels 30 inches side, 18 inches front. Capacity, 400 pounds. Price, with 3 Steel Wheels, \$21.50; with Wood Wheels, \$25.



Pittsburgh Garden Barrows

These Barrows are made of thoroughly seasoned wood, have double frames, firmly bolted together and iron braced. They are neatly finished and very strong.

No. 1. Large. Body 30 x 24 in.; sideboards 12 x 30 in.; wheels 1 3/4 x 22 in. \$9.50.

No. 2. Medium. Body 28 x 20 in.; sideboards 12 x 28 in.; wheels 1 3/4 x 20 in. \$8.

No. 3. Small. Body 26 x 19 in.; sideboards 12 x 28 in.; wheels 1 3/4 x 20 in. \$7.50.

No. 4. Boys'. Body 22 x 18 in.; sideboards 9 x 18 in.; wheels 1 1/2 x 15 1/2 in. \$6.

Green Star Home Barrow

SUBSTANTIALLY BUILT FOR USE AROUND HOME

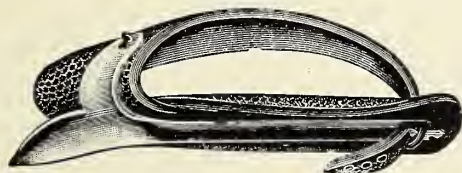
Tray made of No. 18 gauge steel, riveted and vertically reinforced in four places, and has round nose which permits load to be carried over the wheel. Capacity, 3 cubic feet, heaped. Wheel, 1 1/2-inch tire, 8 spokes. All wood parts are made from well-seasoned, selected hardwood. Tray painted black; frame red. \$5.25.



Husking Pins



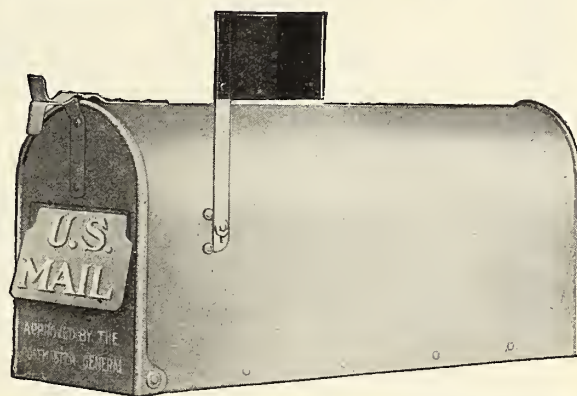
No. 200. Cold rolled steel, nickel-plated pin 5 inches long, mounted on heavy elk leather shield and adjustment, three compartment finger strap. 20 cts., postpaid 25 cts.



No. 2800. Cold rolled steel, nickel-plated pin with round handle and comfort brace. Mounted with substantial grain leather protection and strap. 20 cts., postpaid 25 cts.



No. 0. 4 1/2 inches long, made of best cold rolled steel, nickel plated, with three-finger strap and buckle adjustment. Grain leather. 10 cts., postpaid 15 cts.



R. F. D. and Parcel Post Mail-Boxes

This box possesses the highest standard of workmanship and excellence of finish. Substantial and operates perfectly. It is absolutely proof against all weather. Box is fitted with easily operated right-angle signal visible at a great distance. Made of 20-gauge galvanized sheet steel, and finished in weather-proof aluminum bronze. Approved by Postmaster-General.

No. 1. R. F. D. Size, 18 1/2 x 7 1/2 x 6 1/4 inches...	\$1 25	Postpaid	\$1 40
No. 2. Parcel Post Size, 23 1/2 x 14 x 11 inches..	3 50		3 75

ROOFING AND PAINT



Everlastic Mineral-surfaced Roofing

EVERLASTIC IS AN UNUSUALLY GOOD MINERAL-SURFACED ROOFING

Used on all kinds of steep-roofed buildings for Roofing, for flashings or valleys and as a starting strip for shingles it is unusually durable and trouble-proof. The felt base, asphalt saturant, and asphalt coating are of the very best quality—generously used. Every step in the manufacture is under continual laboratory control.

The surfacing is natural mineral in unfading colors, securely embedded so the Roofing does not require painting or staining.

Each roll contains 108 square feet and galvanized nails and cement for proper application. Detailed direction sheet in each roll. Furnished in either Soft Red or Moss Green. Width of roll 36 inches. Weight 85 to 90 lbs. \$3.25 per roll; 10-roll lots, \$3 per roll.

Vitex Smooth-surfaced Roofing

Here is a Roofing that gives good service at a medium price—for steep-roofed buildings, for valleys, flashings, etc.

The base is a good-quality felt, thoroughly saturated, and then thickly coated with asphalt, refined in our own plants especially for use in smooth-surfaced roll Roofings. Both sides have medium corrugations and are surfaced with talc. Each roll contains 108 square feet and nails and cement for proper application. Detailed direction sheet in each roll.

PRICES

	Width	Weight	Roll
Light.....	36 inches	35 pounds	\$2 15
Medium.....	36 inches	45 pounds	2 65
Heavy.....	36 inches	55 pounds	3 15

10-roll lots, 10 cts. per roll less.

Tomahawk Smooth-surfaced Roofing

A low-priced Roofing for temporary buildings, sheds, out-buildings, etc.

Tomahawk is made in the usual manner by saturating and coating dry felt with asphalt. Both sides are finished with broad corrugations and talc surfaced. Considering its low price, Tomahawk represents a very good value.

Each roll contains 108 square feet and nails and cement for proper application. Detailed direction sheet in each roll.

PRICES

	Width	Weight	Roll
Light.....	36 inches	35 pounds	\$1 55
Medium.....	36 inches	45 pounds	1 90
Heavy.....	36 inches	55 pounds	2 25

10-roll lots, 10 cts. per roll less.

WRITE FOR SAMPLES

Alastic Ready Mixed Paint

For Tin, Iron and Steel Roofs, Fences and Paper Roofs, Alastic Black Paint and a patch of muslin or canton flannel will stop bad leaks in roofs, gutters, etc. Alastic Red Paint contains oxide of iron and linseed oil and is an excellent paint for all metal surfaces. It does not prevent solder from adhering.

PRICES

	Black	Red
1-gal. can.....	\$1 25	\$1 75
5-gal. kit.....	4 50	7 00
1/2-bbl. (30 gals.).....	19 50	33 60
Barrel (50 gals.).....	29 00	52 50

"CARBOLINEUM" U. S. Trade-Mark No. 14048 1887-1937

Preserves wood everywhere against rot and decay and adds at least 100 per cent to the life of fence-posts, poles, sills, floors, bridge timbers, porches, wood imbedded in concrete, or ground. As an exterior and interior coating for wood in silos, ice-houses, root-cellars, water-tanks, flumes, stable floors and wherever exposed to moisture, it is unsurpassed.

Carbolineum as a stain for shingle roofs, buildings, bungalows, barns, stables, granaries, wind-mills, towers, etc., combines color effect with wood preservation.

The nut-brown stain applied by the Carbolineum, trimmed off with a white paint on eaves, cupolas, ventilators and cornices, will make one of the most attractive outside coatings for such buildings.

In root-cellars and other damp places it will effectually prevent the growing of fungus.

COVERING CAPACITY. First Coat: 350 square feet per gallon on dressed lumber. 250 square feet per gallon on rough lumber. 100 square feet per gallon on shingles.

Second coat only requires one-third or one-fourth the quantity for first coat.

Kills chicken-mites in poultry-houses. Apply once a year.

Ask for special circular. Also see page 202.

PRICES

Gal. can \$1.75; 5-gal. can, \$1.45 per gal.; 10-gal. drum, \$1.30 per gal.; 35-gal. steel barrels, \$1.10 per gal.; 55-gal. steel barrels, \$1.05 per gal.

Stormtight

FOR USE ON ANY ROOF IN ANY WEATHER

Makes Roofs Leakproof Quickly-Cheaply Permanently!

Any roof in any condition will be made leakproof by a coating of Stormtight and kept so for years.

Even the worst leaky roofs can be saved for long service by Stormtight and you can be saved the cost of a new roof.

Coat your good roofs with Stormtight and protect them from future leaks.

It is not cracked by heat and cold because its weather-resisting ingredients do not dry out, but remain rubber-like.

Cheaper than paints because of its long life. Easily brushed on by anyone—you can do it. It comes ready to apply.

PRICES

LIQUID

	Per gal.,	Black	Maroon
Drums (64 gals.).....	\$1 50	\$2 00	
Drums (38 gals.).....	1 60	2 10	
Drums (10 gals.).....	1 80	2 30	
Cans (5 gals.).....	1 90	2 40	
Cans (1 gal.).....	2 00	2 50	

PLASTIC

	Per lb.,	\$0 21	\$0 26
Cans (10 lbs.).....		22	27
Cans (5 lbs.).....		25	30

Three-Knot Brushes Each, \$1 75

Stormtight comes ready for use and can be applied without mixing, thinning, or heating.

Simply sweep the surface of the roof clean, pour on Stormtight-Liquid, and brush it out to a thickness of $\frac{3}{4}$ of an inch or thicker, if the surface is very old or porous. Use a stiff-bristle, three-knot brush in applying Stormtight-Liquid. Anyone can do the work.

Fairbanks-Morse Type "Z" Engines

OPERATED ON KEROSENE
OR GASOLINE

OVER 400,000 "Z" ENGINES NOW IN USE

That in itself is worth your closest consideration—the fact that there have been over 400,000 "Z" Engines sold in all parts of the world. When a product leads its field as the "Z" does, you may be sure there's a good reason for its leadership. The "Z" is today the perfected result of over twenty-five years of pioneer Engine development.

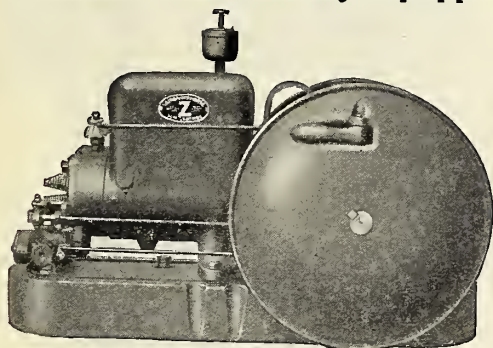
You don't buy an Engine every day. Therefore, make it a test job not a guess job. Go over the "Z"—get right down into its working parts; you'll find feature after feature that mean economy and power and dependability and long life, advantages that make the "Z" the Engine to do your work quickly, easily, and at lowest cost.

THE FAIRBANKS-MORSE "Z" ENGINE DOMINATES THE FARM ENGINE FIELD

	Price
2 Horse-power "Z" with Magneto.....	\$65 00
3 Horse-power "Z" with Magneto.....	114 00
6 Horse-power "Z" with Magneto.....	174 00
10 Horse-power "Hopper Cooled" with Magneto.....	413 00
10 Horse-power "Closed Cylinder" with Magneto.....	374 00
15 Horse-power "Closed Cylinder" with Magneto.....	470 00
20 Horse-power "Closed Cylinder" with Magneto.....	775 00
No. 11 Belt-Driven Pump Jack.....	14 00
Four-wheel Truck for 1½ Horse-power Engine.....	7 00
Four-wheel Truck for 3 Horse-power Engine.....	11 00
Four-wheel Truck for 6 Horse-power Engine.....	19 00

F. O. B. Pittsburgh, Pa. Write for Special Catalogue

Fairbanks-Morse "Z" Engine 2 Horse-Power. Battery Equipped

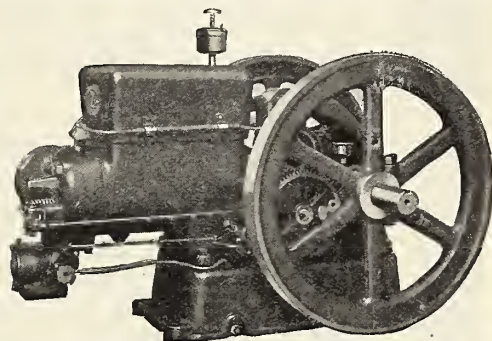


2 Horse-Power Engine, Battery Equipped

Three dominant features are characteristic of this Engine: Simplicity of design, distribution of material, and interchangeability of parts. This Engine has been made so simple and of so few parts that many adjustments are eliminated. The materials are so distributed as to give the greatest strength and balance to engine.

The ignition system consists of four dry cells with a vibrator coil compactly mounted in a substantial, waterproof metal box. No complicated igniter is required as with the low tension ignition system; simply standard spark plug located in the cylinder head. The brief contact of the timer insures long service from the batteries. These engines have hit and miss governor and are built for operation on gasoline only. Control lever gives five speed changes. Carburetor requires no adjusting. Finished in bright red with black trim and mounted on a pressed steel base. Price \$54.50; mounted on 4-wheel truck, \$7 extra. Ask for special circular.

No slipshod methods are permitted in the construction of "Z" Engines. Every part is built as carefully as the parts in your automobile. Some working parts are machined to within 1/2 or 1 one-thousandth part of an inch.



3 Horse-Power Engine Equipped with Rotary High-Tension Magneto

Iron Pumps

Rex Deep-Well Lift Pump

This is our new pattern anti-freezing, constant-flowing Deep-Well Pump, fitted with reversible handle and improved compound handle rest. While the Pump is designed for deep wells, yet it can be used in cisterns or wells as deep as 150 feet. Furnished with either 2½- or 3 x 10-inch cylinders at the following prices:

With iron cylinder.....	\$9 00
With brass-lined cylinder.....	10 75
With brass-body cylinder.....	12 50

If wanted complete with 1¼-inch galvanized pipe and 3/8-inch galvanized steel rod add to above prices 25 cents per foot for depth of well.

New Fountain Double Acting Force and Lift Pump

The New Fountain is the simplest and most efficient deep-well pump on the market. It has a double air-chamber, which enables the pump to throw an absolutely solid stream, just like a hydrant. Has smooth bore cylinder and brass valve seat; made to face the front or side by simply loosening set screw at top. It will go in hole as small as 4¾ inches. The upper cylinder is brass lined. Anti-freezing.

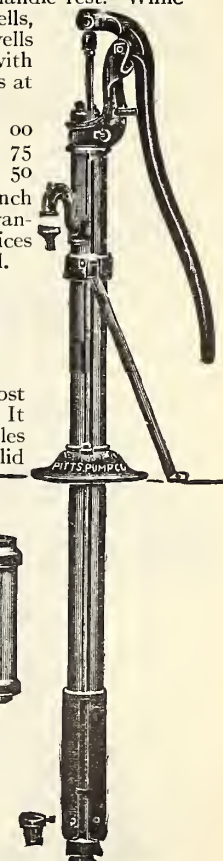
Rex

Furnished with either 2½- or 3 x 12-inch cylinders at the following prices:

With brass-lined cylinder.....	\$17 50
With brass-body cylinder.....	18 50

If wanted complete with 1¼-inch galvanized pipe and 3/4-inch galvanized steel rod, add to above prices 25 cents per foot for depth of well.

If Three-Way is desired, add \$3.50 to above prices. If Wind Mill Top is desired, add \$2.50 to above prices.



New Fountain

Wood Pumps



Size	Length	Cylinder	Unlined	Porcelain Lined
6 x 6 in.	6 ft.	3 1/2 in.	\$8 50	\$10 50
6 x 6 in.	7 ft.	3 1/2 in.	9 25	11 25
6 x 6 in.	8 ft.	3 1/2 in.	10 00	12 00
6 x 6 in.	10 ft.	3 1/2 in.	12 00	14 00

Tubing for above pumps, 4 x 4 in., in 8-, 10-, and 12-foot lengths, 32 cts. per ft.

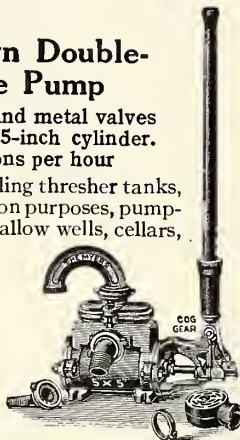
Couplings with bands for 4 x 4-in. tubing. 90 cts. ea.

In ordering give depth from top of platform to bottom of well. Prices on other sizes Wood Pumps quoted on request.

Giant Low-Down Double-Acting Force Pump

Has brass valve seats and metal valves faced with rubber. 5 x 5-inch cylinder. Capacity 2,000 gallons per hour

This is a fine Pump for filling thresher tanks, washing out boilers, irrigation purposes, pumping water from trenches, shallow wells, cellars, barnyards, etc. It is very compact and strong for its size and weight and has large and direct waterways and ample valve capacity. It is easy of operation, the Pump throwing an abundance of water with the least pumping labor. The cog gear head is reversible and can be used on either end of Pump.



Wood Pump

No. R479. With hose nipple, hose-band, and strainer, \$13.

Suction Hose

	Per foot
"Granger Brand." Wire lined, in 15 and 20-foot lengths.	
2-inch.....	\$0 57
"Royal Brand." Wire lined, in 15 and 20-foot lengths.	
2-inch.....	83
"Tiger Brand." Hard rubber. 3/4-inch.....	30
1-inch.....	35
1 1/4-inch.....	53

Pitcher Spout Pump

Has smooth-bore cylinder and brass valve seat, with revolving top, allowing lever to be placed at any desired position, and may be used successfully in cisterns or wells as deep as 25 feet.

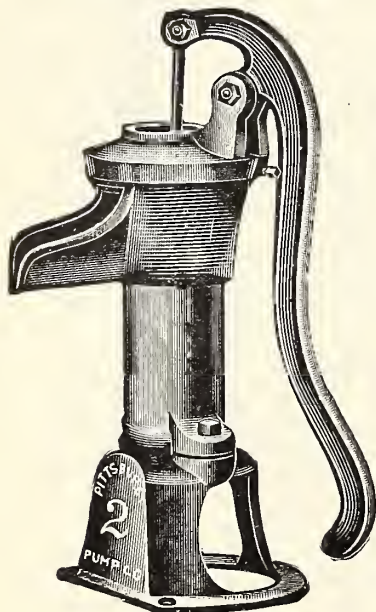
PRICES

No. 2. 3-inch cylinder, polished iron, \$3; brass lined, \$5.50, by Parcel Post, 40 cts. extra.

No. 3. 3 1/2-inch cylinder, polished iron, \$3.50; brass lined, \$6, by Parcel Post, 40 cts. extra.

Galvanized Pipe for above. 1 1/4-inch, cut to length and threaded, 21 cts. per ft.

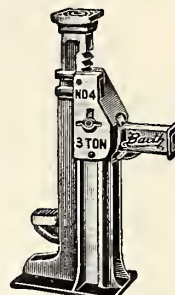
If you do not find what you want in this catalogue write us about it.



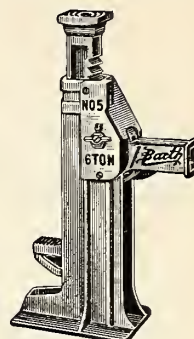
Barth Jacks



1-ton



3-ton



6-ton

Barth Jacks are favorably known the country over. They are well made of the best material with a view to securing the greatest strength and durability with the lightest weight.

The No. 2 1-ton Jack is intended for wagons and automobiles; the No. 4 3-ton Jack for trucks, threshers, and hay balers; the No. 5 6-ton Jack is intended for traction engines and other heavy work.

	Capacity	Height in.	Rise in.		Postpaid
No. 2.	1-ton	14 1/2	10.....	\$4 00	\$4 30
No. 4.	3-ton	14	8.....	8 00	8 45
No. 5.	6-ton	18	11.....	11 50	12 00

Fairbanks Portable Platform Scale

Only weight determines actual quantity. Don't depend on any other method of measurement for no other method is absolutely certain.

For nearly one hundred years, Fairbanks Scales have been recognized as the world's standard of accuracy in weighing. They are dependable through a lifetime of service.

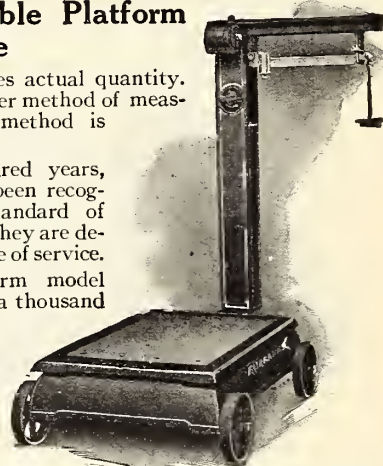
The Portable Platform model shown here has literally a thousand uses. It is known the country over as a money-saver and profit-maker in factories, warehouses, stores, on farms, and in hundreds of businesses.

The arrow-tip beam, of heavy polished brass and with clear cut graduation and large plain figures, the easy-reading poise, and many features have been so popular that production on this model is now so large that extremely low prices are made possible.

This Scale meets fully all specifications and requirements of State and National regulations on weights and measures. It is accepted everywhere as the standard.

No. 1128. Capacity 500 lbs., platform 16 in. x 25 in. ...\$19 50

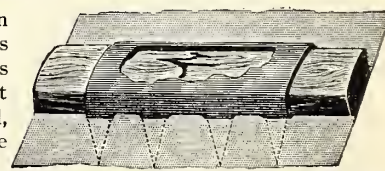
No. 1124. Capacity 1,000 lbs., platform 18 in. x 27 in. .. 22 50



Canvas Slat Menders

For repairing broken Binder Canvas Slats. Slats can be repaired in 2 minutes by using Instant Slat Repairers. Quickly applied, permanent repair. Save time and money.

1 box, six Menders 35 cts., postpaid 40 cts.; 2 boxes, twelve Menders 60 cts., postpaid 65 cts.



SANDUSKY WASHING MACHINES

LATEST IMPROVED MODELS

Sandusky Washers are so designed and perfected as to please the most discriminating buyer. Each and every machine positively gives service and satisfaction. Fully guaranteed against imperfect material and workmanship.

No. 5-B, 6 and 8 Sandusky Platform Washers are designed to operate either from electric motors or gasoline engine drive. These machines are of the standard peg dolly type. Main gearing mill cut, running in tight grease packed gear case. Castings made from gray iron, malleable and steel. Platform made of steel angles well braced with steel flats and will withstand all strains. All castings finished with blue and black enamel, trimmed with gold and aluminum bronze. Platform finished with aluminum bronze. Tub made from selected Virginia cedar, finished in natural color with one coat of shellac and three coats of high-grade waterproof varnish.

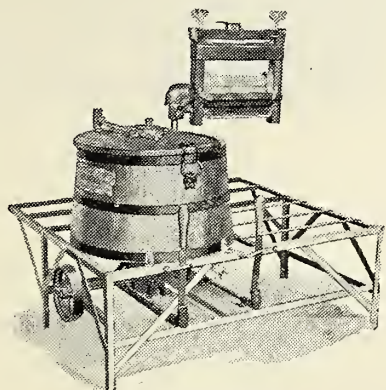
All electric models are equipped with standard electric motors of $\frac{1}{4}$ horse power. These models are mounted on steel roller casters. Power models equipped with flat-face pulley for gas engine or other belt drive, or with grooved pulley for drive from lighting plant power stand. All platform models equipped with standard wood frame wringer, 11-inch rolls, enclosed cogs, safety release, swinging reversible type. An especially designed clutch and system of gears allows washer and wringer to be operated at will.



No. 6. Electric

Tub inside 12 inches deep by 20 inches diameter. Platform length with rack raised 39 inches, with rack folded 27 inches, width 24 inches, height 16 inches. Height from floor to top of tub 32 inches, height from floor to top of wringer 46 inches.

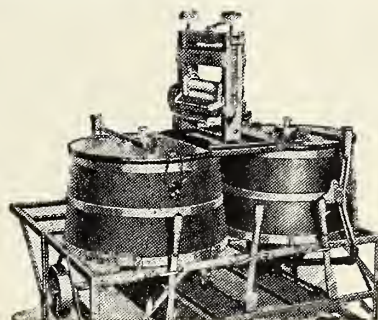
Power Model (Weight 190 lbs.).....\$52 00
Electric Model (Weight 215 lbs.)..... 82 00



No. 5-B. Power

Tub inside 12 inches deep by 20 inches diameter. Platform length 47 inches, width with rack raised 42 inches, with rack folded 24 inches, height 16 inches. Height from floor to top of tub 32 inches, height from floor to top of wringer 46 inches.

Power Model (Weight 215 lbs.).....\$55 00
Electric Model (Weight 245 lbs.)..... 85 00



No. 8. Twin Tub Power

Tub inside 12 inches deep by 20 inches diameter. Platform length 47 inches, width with rack raised 42 inches, with rack folded 24 inches, height 16 inches. Height from floor to top of tub 32 inches, height from floor to top of wringer 46 inches.

Power Model (Weight 285 lbs.).....\$70 00
Electric Model (Weight 310 lbs.).....105 00

No. 5 One-Minute Washer

The One-Minute Model No. 5 represents a very efficient and simple hand-washer at a moderate price.

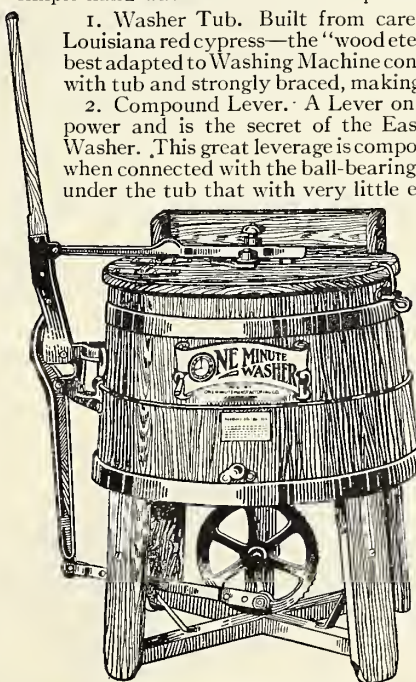
1. Washer Tub. Built from carefully selected kiln-dried Louisiana red cypress—the "wood eternal"—which has proven best adapted to Washing Machine construction. Legs are solid with tub and strongly braced, making tub strong and durable.

2. Compound Lever. A Lever on a Lever that trebles the power and is the secret of the Easy Running One-Minute Washer. This great leverage is compounded and so distributed when connected with the ball-bearing fly-wheel mounted close under the tub that with very little effort the fly-wheel gains

sufficient momentum to carry the load. This wonderful Compound Lever is used only on the One Minute Washer. It is a real labor-saving invention.

3. Driving Mechanism. All under tub out of the way—protects you from accidents—protects your clothes from dirt. Heavy die cast gear, securely attached to upright post, operates lightning speed fly-wheel under tub bottom. Strong and durable; will give years of service.

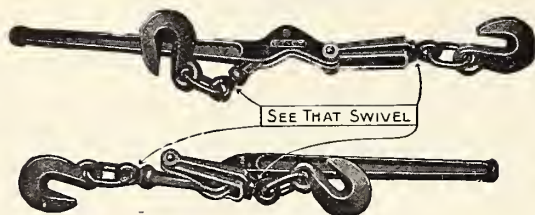
4. Washing Principle. Strictly modern solid-peg dolly is used;



washes rapidly and without injury to the finest fabrics.

Price \$19.50

Stacy Swivel Load Binders

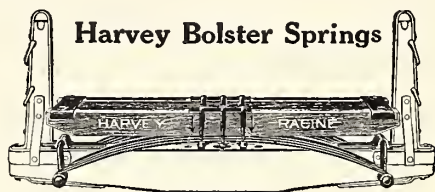


One of the handiest tools on the market for binding loads of logs, lumber, pipe, boilers, poles, or any load that requires binding with a chain. Does away with all the inconveniences and shortcomings of the old-fashioned dangerous boom-pole and soon pays for itself in saved time and labor. Binds loads firmly, quickly and easily. No longer need you risk your life with old-fashioned boom-poles, no longer need you experience the trouble of having your load slip off, because not securely bound. Simply slip grab hooks over links of the chain, give lever a downward pull and the load is bound to stay.

It also makes an excellent wire stretcher. It is just the thing for hauling heavy loads in hilly country where one finds it necessary to lock the wheels going down. With it, the wheels can be released on reaching the bottom without backing up the heavy load to slacken the chain—just stop, anywhere—raise the lever and the wheel is released.

Made of best material and guaranteed to stand from three to five tons breaking strain. Fits any ordinary log-chain.

Weights 7 pounds. The swivel joints permit hooks to turn with twist of chain and prevents chain from breaking. \$2.50 ea.; postpaid \$2.75.



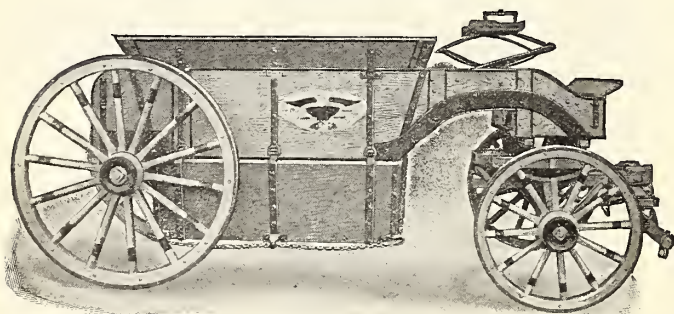
Harvey Bolster Springs

They will change your farm wagon into a spring wagon. They relieve the jars, jolts, strains and noise of a springless wagon. They make it run easier, smoother, and quieter.

Price per set—Always give capacity and length wanted

Capacity lbs.	For 36- or 38-in. bolster	For 40- or 42-in. bolster	Capacity lbs.	For 36- or 38-in. bolster	For 40- or 42-in. bolster
1,000.....	\$8 50	\$9 50	4,000.....	\$16 00	\$18 00
1,500.....	9 00	10 00	5,000.....	18 00	20 00
2,000.....	11 00	12 00	6,000.....	20 00	22 00
2,500.....	12 00	13 00	8,000.....	24 00	26 00
3,000.....	14 00	15 00	10,000.....	28 00	30 00

The Eagle Dump Wagon



The Eagle Dump Wagon

Miniature Farm Wagon



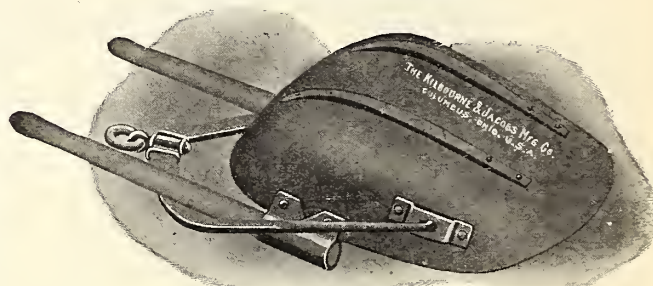
The most perfect reproduction in miniature of the full-sized farm wagon on the market. Not a toy wagon. We can assure you it is the strongest and handsomest Miniature Wagon on the market. The dimensions are as follows:

Body, 18x36 inches, with oak frame. The sides and ends can be taken off, leaving bed with stakes, or the entire body may be removed, leaving gear in shape to be used in numberless ways. The gearing is made exactly like a farm wagon, having bent hound and adjustable reach.

Has seat, and a hand tongue. Can furnish shafts for dog or goat. Price with tongue, \$10.50; shafts extra \$1.25.

Columbus Steel Drag Scraper

Absolutely seamless throughout



The most economical tool made for making and mending roads. The bails are of steel and of improved pattern, with strong and perfectly working swivels.

No. 1. Carries 7 feet of earth. Used for long haul or down grade.

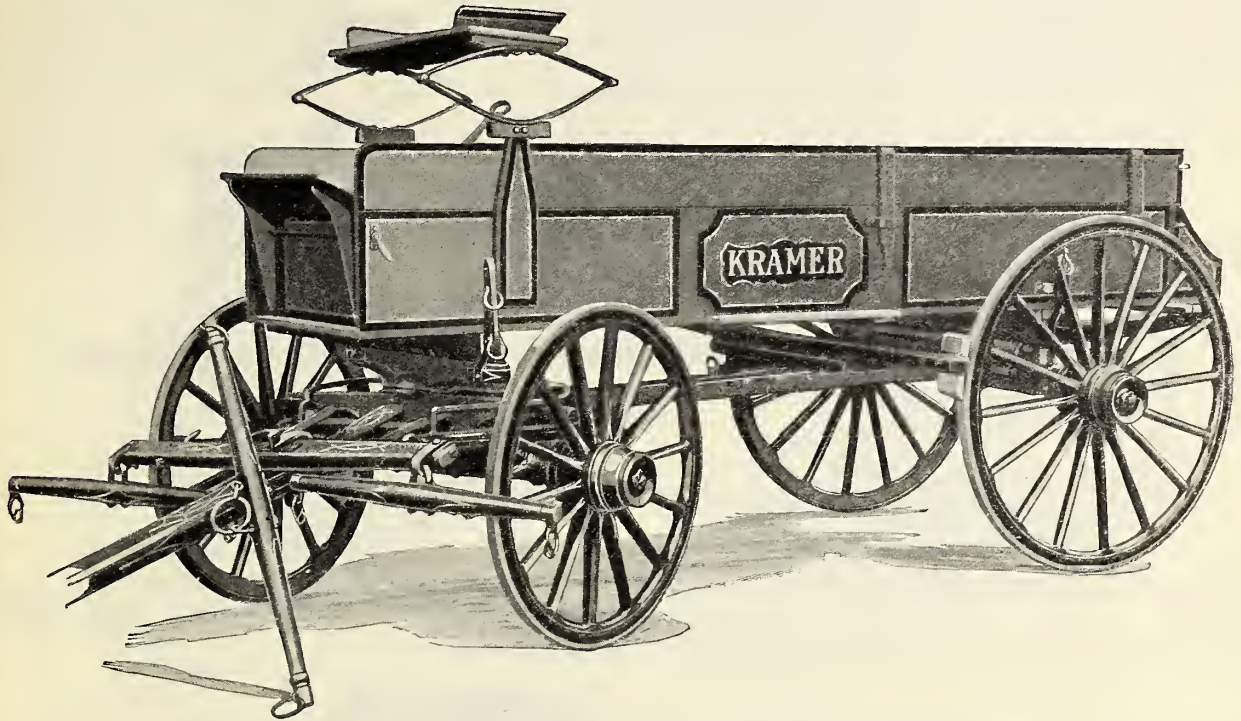
Size of bowl: Top of back to cutting edge, 34 inches; width, 33 inches; depth, 10 in.; weight, 105 pounds. With runners, \$9.50.

No. 2. Carries 5 feet of earth. For all ordinary grading, farm, road or township work. Size of bowl: Top of back to cutting edge, 31½ inches; width, 29½ inches; depth, 9½ inches; weight, 97 pounds. With runners, \$9.

The most widely used bottom Dump Wagon in the United States. It has made a place for itself during the last 25 years that is seldom attained by a like product. It is the favorite of the large user of Dumpers who places his orders in carload lots, and it is just as popular with the user who has but one team, for the wagon is well made, of high-grade material and workmanship, and is equipped with the most up-to-date and practical devices and appliances that go to make a usable and serviceable Dump Wagon. Its draft is easy and its service is long. Ask for catalogue and prices.

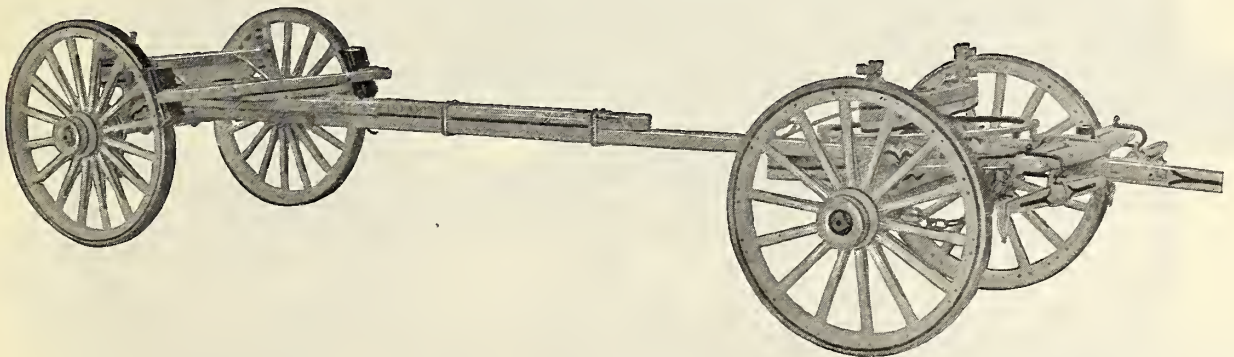
Kramer Wagons

The Kramer Wagon has established and maintained for itself a name for being the best all-round farm, lumber, and general-purpose Wagon on the market. We must admit that this is due in some measure to the force of circumstances, for we are situated in the center of the Pennsylvania oil-fields, a section of the country far famed for its steep hills and rough roads, where inferior work and shoddy material cannot stand the wear and tear.



The Famous Kramer Double Hound Wagon

The Double Hound Wagon fills practically every need. It has been rightly named General-Purpose Wagon. We do not believe there is a stronger Wagon on the market today and for this reason it is used extensively throughout the coal-fields as well as on the farms.



Kramer Oil-Field Chaser Reach Wagons

Manufactured in the heart of the country's oldest oil-field, Kramer Wagons have always been identified with the oil industry. From our experiences along this line there was developed the Chaser Reach Wagon, especially adapted for hauling drilling tools and casing.

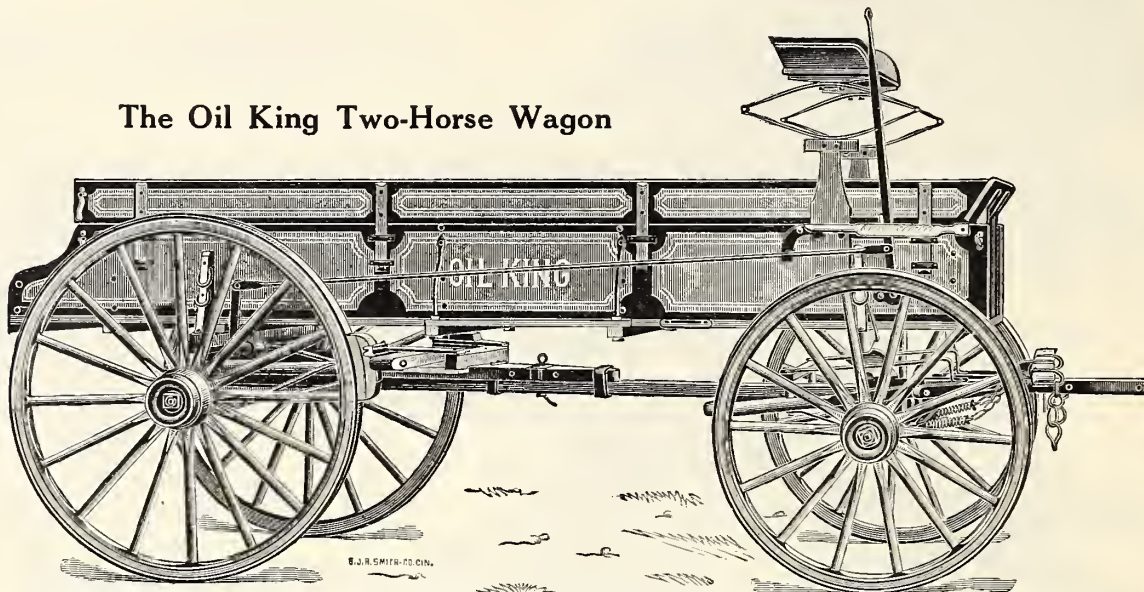
Kramer Wagons are furnished in either Wood Axle Cast Skein, Wood Axle Steel Skein, or the famous Tubular Steel Axle. They are also furnished either with Drop Tongue or Coach-Pole, either Gear or Swing Brake.

In one-horse style they are furnished with $2\frac{1}{2}$ -, $2\frac{3}{4}$ -, or 3-inch skein; in two-horse sizes, $2\frac{3}{4}$ - 3-, $3\frac{1}{4}$ -, $3\frac{1}{2}$ -, $3\frac{3}{4}$ -, and 4-inch Skeins. Special catalogue and prices furnished on request. In asking for prices please use the above specifications.

Oil King and Brown Wagons

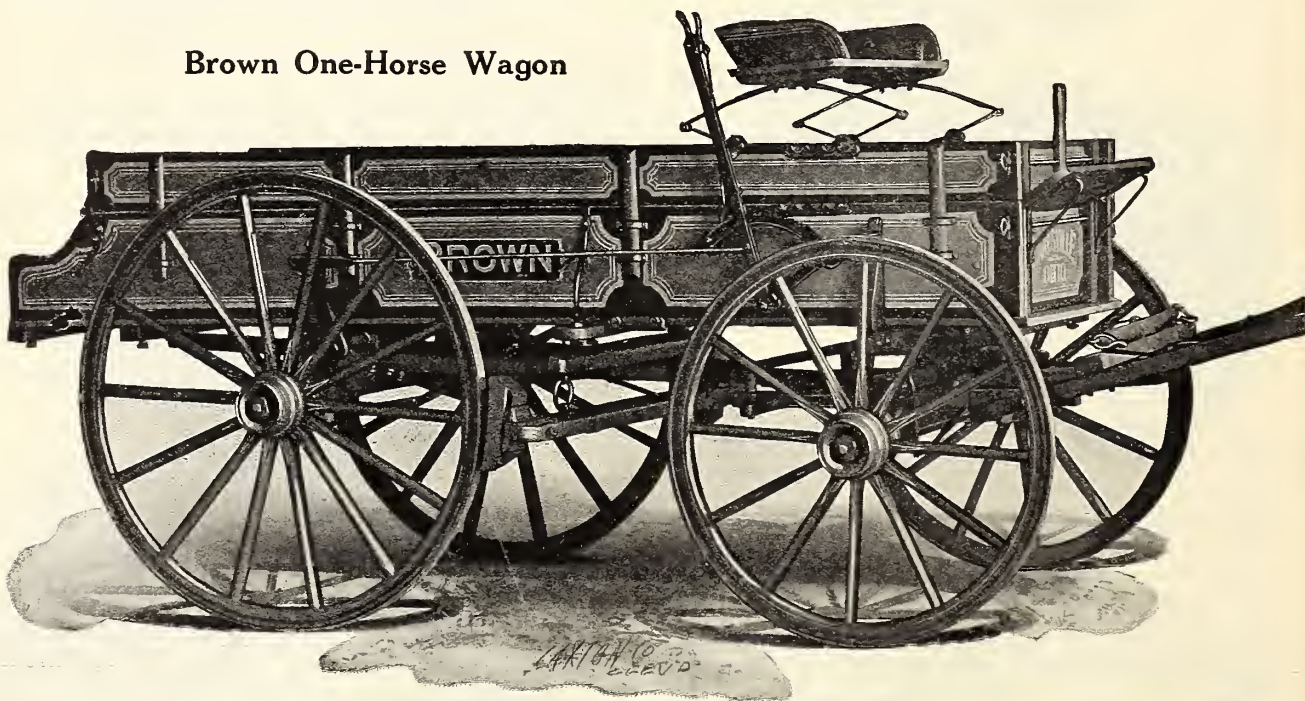
The first Brown Wagons were built in 1873, fifty years ago. They have only added to their prestige, as the years have demonstrated their strength and durability, until today they are regarded as the highest standard in Wagon construction. Too great care cannot be taken in selecting a Wagon, and a carefully and scientifically built Wagon like the Oil King or the Brown will last practically a lifetime.

The Oil King Two-Horse Wagon



The Oil King Wagons are made from the very best material obtainable, are well ironed and specially adapted for general farm purposes and heavy hauling. We now furnish them with low front wheels turning under body to the coupling pole. We furnish them with any width of tire desired, with steel or cast skeins, stiff tongue and tongue chains, or drop tongue and neckyoke. Write for special catalogue and prices, specifying style and size of wagon in which you are interested.

Brown One-Horse Wagon



The Brown One-Horse Wagon is made extra heavy and well ironed. It will outwear two ordinary one-horse Wagons. Made with either cast or steel skeins, top gear or swinging brake; with falling tongue and neckyoke for two horses when desired.

Furnished in three sizes from $2\frac{1}{2} \times 8$ inches to 3×9 inches, weighing from 800 to 1,000 pounds, with a capacity from 1,500 to 3,000 pounds. Regular tire $1\frac{1}{2} \times \frac{1}{2}$ inches, but other widths and thicknesses can be furnished. Special catalogue and prices on request.

The Ohio One-Horse Wagon

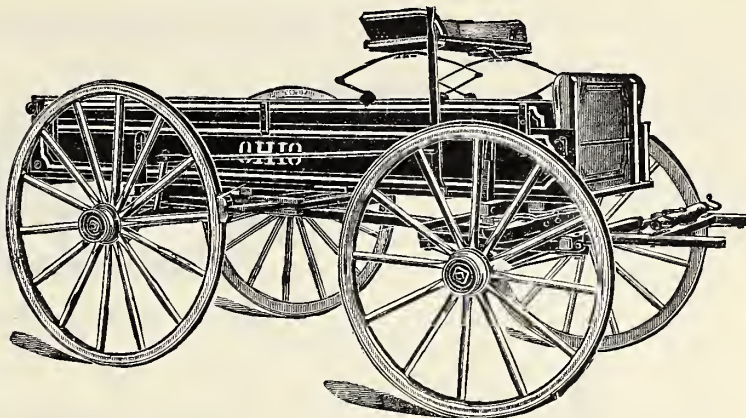
No. 19 Ohio. $2\frac{3}{8} \times 7$ Skein

This Wagon is designed to meet the demand for a moderate-priced Wagon for light work. Made in two sizes, No. 18, $2\frac{1}{4} \times 7$ skein, and No. 19, $2\frac{3}{8} \times 7$ skein.

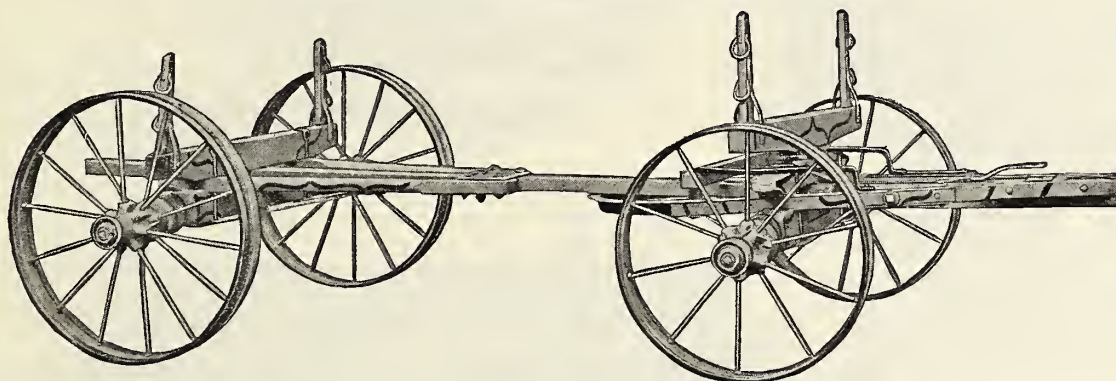
Nothing but the best material is used in their construction: Hickory axles, second-growth oak and hickory spokes, white oak reaches, with best yellow poplar in the boxes.

Furnished with top gear brake, box brake, or without brake.

Dimensions of lower bed: Depth, 10 inches; length inside measure, $8\frac{1}{2}$ feet; width between standards, 38 inches; top box, 4 inches high; wheels, regular height, 3 feet 6 inches front, 4 feet rear; tire, $1\frac{3}{8} \times \frac{3}{8}$ inches. Special catalogue and prices furnished on request.



The Improved Bryson Farm Truck



The Improved Bryson is a "lifetime" Farm Truck carefully made of the best material—it is strong, convenient, and handy in every way. Thousands are in use. The Bryson has ample strength for its full 4,000-pound rated capacity. Axles are hickory fitted with $3\frac{1}{4} \times 10$ -inch cast skeins, standard pattern. Gear parts are clipped, not bolted. Trussed axles. Approved farm wagon construction throughout, including round-angle steel front hound reinforced with wood and strongly braced including $\frac{5}{8}$ -inch square steel circle braces over sand bolster to sway bar. Standards 10 inches high, mortised into bolster. All gear parts, with the exception of the axles, are made of select, thoroughly seasoned oak. All gear parts are hand painted with best quality red lead ground in oil, neatly striped and varnished. Steel wheels are "Electric" standard pattern with grooved tires and staggered spokes. Track 5 feet, 2 inches, center to center of tires, with bolsters 42 inches wide between standards. Price, with 28-inch front wheels, 34-inch rear wheels, $4 \times \frac{3}{8}$ -inch grooved tire, doubletrees, neckyoke and gear brake, \$75. (Brake and Doubletrees not shown in illustration.)

Steel Wheels

We can furnish steel wheels to fit any farm wagon or farm truck. Write for prices specifying size of skein and height of wheels.



No. 4 Pony Wood Saw

Showing Ripping Table Attachment

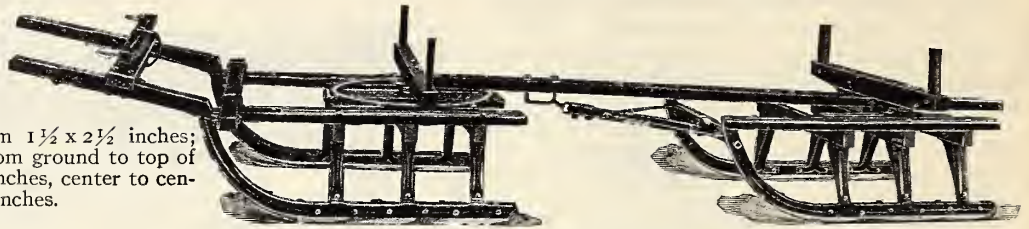
This saw is especially built for high power. Suitable for 3 to 6-horse power engine. With 18-inch blade it will cut round wood 8 inches thick. Frame will admit 20-inch blade. Mandrel is 3 feet 5 inches long, $1\frac{5}{8}$ -inch diameter, fitted for blades with $1\frac{5}{8}$ -inch hole. Balance wheel is 12-inch diameter, weighing 30 lbs. Boxes $3\frac{1}{2}$ inches long; pulley, 5-inch face by $4\frac{1}{2}$ -inch diameter. Table securely hinged to frame. Weight, 110 lbs. Price, with 18-in. blade, \$19.25. Ripping Table, as shown in illustration, \$4.50 extra.

Catalogue and prices of larger sizes on request

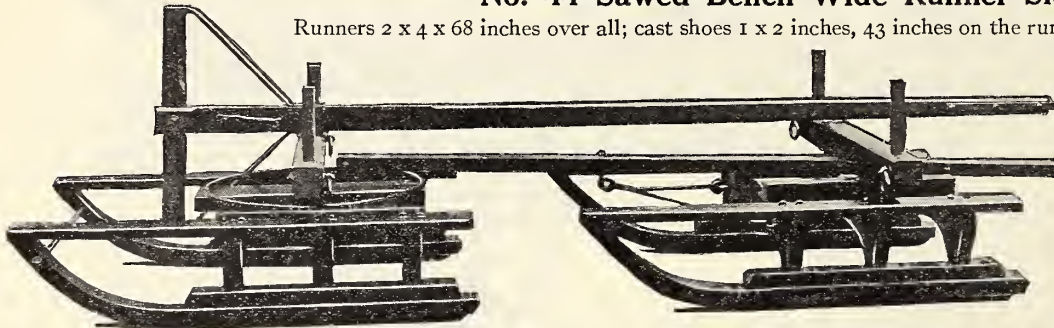
NURSERY STOCK.—We have added a choice list of Roses, Shrubs, Trees and Strawberries to our catalogue. See pages 49 to 58.

No. 2. Snow King—One-Horse Three-Knee Bob-Sled

Full iron circle; straight heel shaft with combination shift bar for either center or side draft; runners $1\frac{1}{4} \times 2$ inches; cast shoe 1 inch on the face, 33 inches on the run; beam $1\frac{1}{2} \times 2\frac{1}{2}$ inches; raves 1×6 inches; height from ground to top of bolster 21 inches; track 37 inches, center to center, bolsters either 38 or 42 inches.

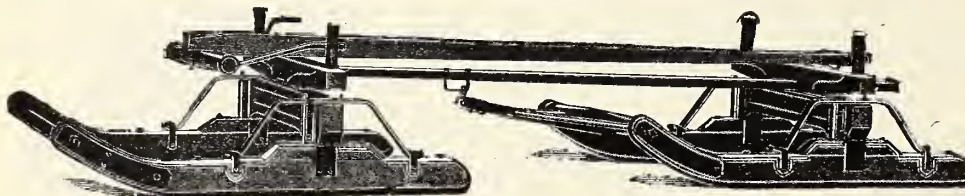
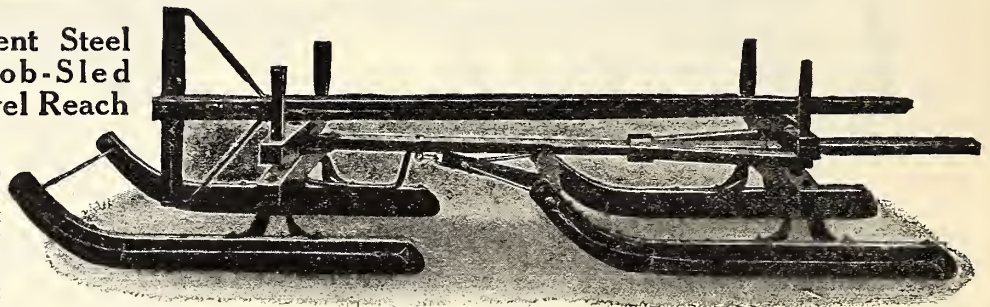
**No. 44 Sawed Bench Wide Runner Sled**

Runners $2 \times 4 \times 68$ inches over all; cast shoes 1×2 inches, 43 inches on the run, in center of runner with steel strips on each side; sawed beams $2\frac{1}{4} \times 7\frac{1}{2}$ inches; raves $1\frac{1}{4} \times 6$ inches; full steel circle; track 37 inches center to center; bolsters $4 \times 5 \times 50$ inches, 38 or 42 inches between standards. Furnished with regular roller coupling or with $\frac{5}{8}$ inch steel bail connection to front bench of rear bob.

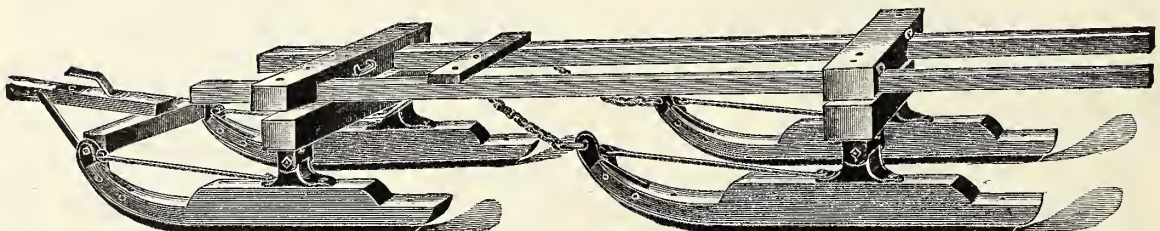
**No. 34. Mandt Patent Steel Knee, Oscillating Bob-Sled with Hounds and Swivel Reach**

Runners 2×4 inches; cast shoe $1\frac{3}{4}$ inches on the face, 40 inches on the run; beams and bolsters $3\frac{1}{2} \times 4\frac{1}{2}$ inches; track 37 inches from center to center; bolsters 38 or 42 inches.

Prices will be quoted on request



Runners $2\frac{1}{2} \times 5$ inches; cast shoes $2\frac{1}{2}$ inches on the face, 54 inches on the run; beams $4\frac{1}{2} \times 7\frac{1}{2}$ inches; bolsters $3\frac{1}{2} \times 4\frac{1}{2}$ inches; height of sled from ground to top of bolster 22 inches; track 37 inches from center to center.

No. 18 Snow King Bob-Sled, Maine Pattern**Nos. 30 and 31 Oscillating Bob-Sled**

Runners 2×4 inches; cast shoe full width of runner 4 feet long with flange 1 inch deep in center; bunks and bolsters 4×5 inches; track 38 inches from center to center, supplied with either single or double reach; bolsters 38 or 42 inches.

No. 31 is same as No. 30, excepting runners are 5 inches wide and bunks and bolsters are 4×6 inches and the knuckles are heavier.

PRICES WILL BE QUOTED ON REQUEST

Minnetonna Home Butter Maker

A combined churn and butter worker for the farm home

The Minnetonna Home Butter Maker is, in working principle, really a miniature of the wonderfully efficient butter-making machines used in big creameries—so simplified and perfected in construction, so modified in size and price that it is placed within reach of the average farmer.

Your churning is done in fifteen minutes or less with the Minnetonna. It takes about ten minutes to work and finish it into the finest creamery butter you ever saw. The secret is all in the basket and rolls. In churning, the cream is vigorously dashed against and through this basket. It is so thoroughly agitated that the butter "comes" in one-half to one-fifth the time required to churn in any ordinary barrel or dasher churn.

This thorough agitation also breaks all the butter fat particles away from the curd, so they all go to make butter instead of leaving some of it in the buttermilk.

The glass peep hole in one end of the drum is always milk wet during churning. The first time the glass clears entirely, you know the butter has "come."

When the churning is done you simply open the faucet at the bottom of the barrel and draw off the buttermilk. This faucet connects with a strainer tube made of perforated metal which prevents the loss of any butter fat particles, which will soon go a long way to paying for it. Next close the faucet and pour in some clean cold water for washing the butter fat globules.

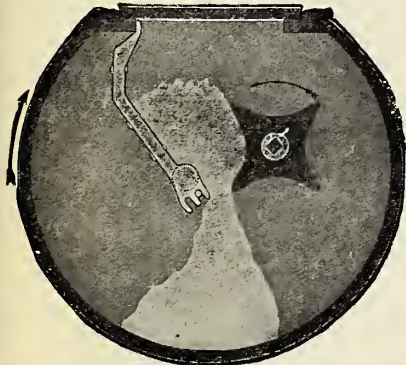
In the Minnetonna the butter comes in flaky granules of even size which are easily cleansed of all the buttermilk by a few turns of the barrel. This is very essential if you are to have an extra fine grade of creamery butter, which will be of good flavor and good keeping quality. When you have drawn off the wash-water the butter is ready to work. Work in moisture, add salt—and work in salt, all done within five minutes.

The Minnetonna process greatly shortens the time and reduces the labor of working the butter, produces the correct texture of body in the butter and incorporates the proper amount of moisture and salt, distributing the moisture evenly throughout the butter, preventing water pockets and makes a dry appearing, firm body, perfect texture and maximum overrun.

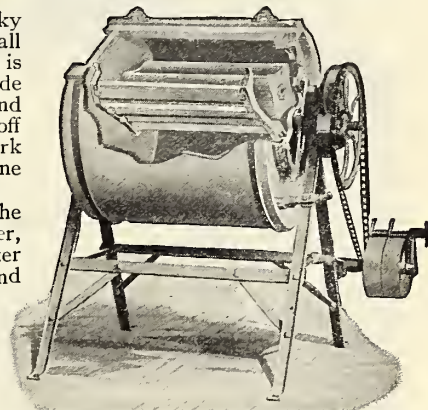
With old-style churns when you take the butter out of the barrel it is in a soft mass, the buttermilk has not been washed out thoroughly, the butter has not been worked, it has not been salted, and the operation is not in any way complete. It takes a long time with the ordinary farm churn to finish the job after the churning is done,

and then the butter is almost sure to be only a fair quality. There is no exposure to air with the Minnetonna and no chance for flies to get into the butter while working it—you home buttermakers know this is a distinct advantage.

No. 1-H.P. Minnetonna. Hand operated



Cross-section view, showing how the butter is worked between two rolls



No. 2-H. P. Minnetonna, with part of side and one end cut away to show the position of basket and working roll inside of all Minnetonna models.

Factory No.	Capacity drum half full	Butter-working capacity	Shipping weight	Style	Price	With electric motor
1-H.	12 gal.	3 to 20 lbs.	195 lbs.	Hand Operated only.....	\$60 00	
1-H.P.	12 gal.	3 to 20 lbs.	210 lbs.	Hand and Power.....	70 00	\$105 00
2-H.P.	20 gal.	5 to 40 lbs.	250 lbs.	Hand and Power.....	75 00	125 00
3-P.	40 gal.	10 to 100 lbs.	375 lbs.	Power.....	125 00	275 00

When ordering with electric motor, give voltage, direct or alternating current, and if alternating, the cycles.

BEFORE YOU BUY ANOTHER CHURN WRITE FOR SPECIAL CATALOGUE OF THE MINNETONNA

What Satisfied Customers Think of the Minnetonna

"The Churn is doing fine. We are making about 50 pounds a week. Can't make enough to supply the demand. The butter beats all around here, and we will be making over 100 pounds a week before long."

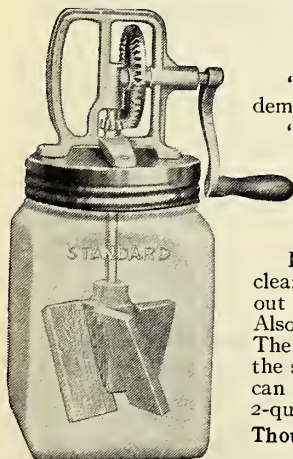
"Enclosed find check for the two Churns which are certainly satisfactory in every respect. We have taken off 26½ pounds of the finest butter we ever made at one churning. The last seven days we churned 102½ pounds and sold it at the top price."

Standard Glass Churns

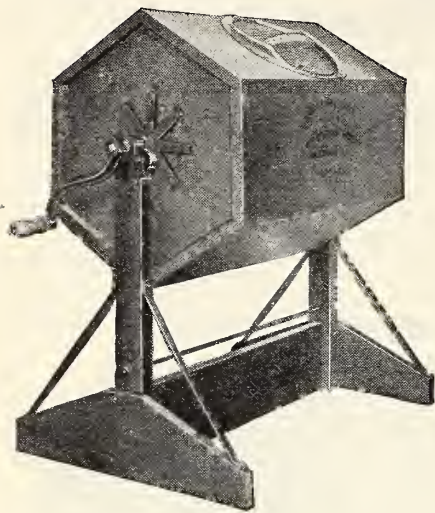
Latest Improved Butter Churn. You can make butter for home use in from 8 to 10 minutes. Easy to clean. All except the small size have perforated draining cap in lid which permits buttermilk to be poured out and water poured in for washing butter. Churn is clear glass with rounded corners and large mouth. Also used extensively for mixing cake ingredients, beating eggs, whipping cream, and mixing salad dressing. The scientific construction of the 4-blade hardwood dasher, giving a rotary motion to the cream against the square sides of the churn, is what makes it the best churn ever made. Extra jars for Glass Churns can be furnished.

2-quart	\$2 00	Postpaid	\$2 20	4-quart	\$3 00	Postpaid	\$3 25	6-quart	\$3 50	Postpaid	\$3 75
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Thousands of these glass churns have been sold in the last few years and have the approval of every housewife who has used them



The Fenner Six-Sided Revolving Churn and Butter Worker



CHURNS,
WASHES,
SALTS,
AND
WORKS
THE
BUTTER
IN
THE
CHURN

This Churn has been manufactured for over fifty-seven years, and is in use in practically every state in the Union, also in Canada, Mexico, and Alaska. It is made from 1-inch boards of No. 1 yellow poplar. Each side is fastened to the other by means of long screws and the sides are mortised to the ends and held securely together by screws. Because of the manner of its construction, this Churn **cannot dry out and fall to pieces** when not in use. A large rubber ring, placed in the groove in the edge of the cover, seals the Churn, thereby preventing the cream from leaking out. These Churns are especially adapted to warm climates, on account of being able to finish the product without exposure to the atmosphere. There are no rolls or paddles in this Churn. Three baffle-boards, about 2 inches wide, extend practically the entire length of the Churn, and are fastened on the three alternate sides, edgewise to the center. As the Churn is revolved, the butter falls on these little baffle-boards, divides, passes on, falls and divides again, perfectly washing or working your butter. Remember the **churning, washing, salting, and working** are all done in the Churn. Booklet with each Churn explains the **Fenner Method of Butter-Making**. Pulley for power will be attached when so ordered. All sizes, except the two smallest, have roller bearings at both ends. Two cranks are furnished with No. 5 and all sizes above, except when pulley is attached, then one crank is furnished.

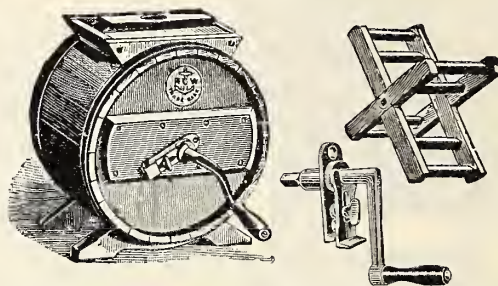
Prices quoted on request on larger sizes. We are in position to furnish you **any** size you desire.

No.	Total capacity gallons	Will churn	Price
A1	6	From 2 quarts to 3 gallons.....	\$9 00
B1	9	From 3 quarts to 4½ gallons.....	12 00
1	12	From 3 quarts to 6 gallons.....	16 00
2	20	From 1 gallon to 10 gallons.....	18 00
3	24	From 1 gallon to 12 gallons.....	20 00
4	30	From 1½ gallons to 15 gallons.....	24 00
5	40	From 2 gallons to 20 gallons.....	28 00
6	50	From 2½ gallons to 25 gallons.....	32 00
7	60	From 3 gallons to 30 gallons.....	40 00
8	70	From 3½ gallons to 35 gallons.....	44 00
9	80	From 4 gallons to 40 gallons.....	48 00
10	100	From 5 gallons to 50 gallons.....	60 00

Churns with Power Pulley attached, extra \$2.50.

Nos. A1 and B1 do not have roller bearings. No. 1 can be furnished without roller bearings for \$2 less than price given in table above. No other sizes are furnished without roller bearings.

Improved Cedar Cylinder Churn



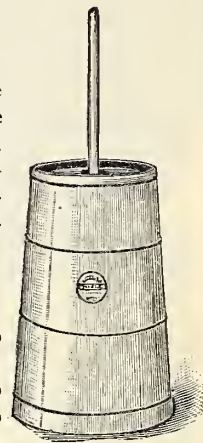
Our Improved White Cedar Cylinder Churn has a double dasher, and the crank is locked to the churn with a clamp and thumb screw, which prevents leakage. Lock cannot break. The top is large, and dasher easily removed. Hoops are of galvanized iron and will not rust. The best Churn in use. All castings are heavily tinned.

No. 1.	3-gallon.....	\$5 00
No. 2.	4-gallon.....	6 00
No. 3.	7-gallon.....	7 00
No. 4.	10-gallon.....	8 00

White Cedar Staff Churns

Our popular Staff and Dash Churns are made of selected, seasoned Virginia white cedar, and are bound with electric welded galvanized wire hoops. Fitted with hand-some covers and hardwood staffs and dashers. These White Cedar Churns are carefully made, sweet, hygienic, and very light to handle.

16-in. Churns	3 gallons.....	\$1 75
18-in. Churns	4 gallons.....	2 00
20-in. Churns	5 gallons.....	2 25
22-in. Churns	6 gallons.....	2 50
24-in. Churns	8 gallons.....	3 00
26-in. Churns	10 gallons.....	3 50



Dandelion Brand Butter Color

Have your butter uniform in color in June and in January. Give butter the "high price" shade uniformly—the year round. Practically every large creamery in the country uses Dandelion Brand Butter Color, which proves it is kept up to the highest standard of quality. Dandelion Brand Butter Color gives to butter that pleasing tinge of yellow which so closely resembles the natural June shade of butter, and enables the buttermaker to find a ready market at top prices.



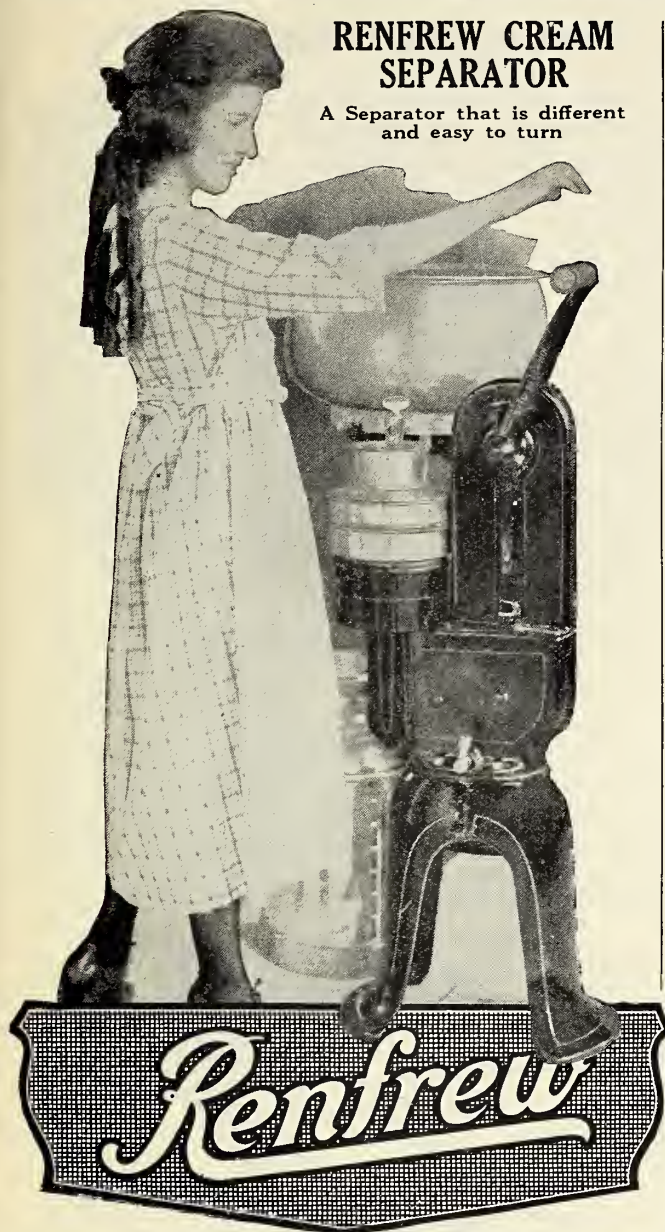
	Small Size.....	Medium Size.....	Large Size.....	Postpaid
	\$0 35	65	1 00	\$0 40 70 1 10

The Superior Rubber Apron For General Utility

Superior Rubber Aprons are very strong and durable, acid, and water-proof—weigh less than one pound. Indispensable for dairy, farm, garden garage, and many other places. Price \$3.25; postpaid \$3.35.

RENFREW CREAM SEPARATOR

A Separator that is different and easy to turn



The Renfrew Cream Separator has a reputation as the easiest running Separator on the market; in fact, the weight of the handle will start the gearing. This is because of the simplified gearing, chain-drive, and self-oiling system which reduces friction and wear and tear on all moving parts.

The Renfrew Cream Separator has achieved remarkable success in the eight years it has been on the market. This is due entirely to the splendid work it does and the unqualified endorsement of the man who owns one and tells his neighbors about it. In other words, satisfied customers are our greatest asset, and the more we sell the more influence the Renfrew exerts in the trade.

This success is due largely to features of the Renfrew which are exclusive—not possessed by any other Separator. Chief among these are the curved wing bowl, the style of neck bearing, the absolute self-oiling system, interchangeable capacity, and the clutch attached to the spindle and in the base of the machine.

To these exclusive features add the high crank, low supply tank, chain drive and steel discs, and remember the Renfrew has the advantage of all the good things found in other makes, and several practical ideas that are to be found only in the Renfrew.

The Renfrew is built from start to finish with such careful attention to details that we feel it is as nearly mechanically perfect as human ingenuity can make it. All these things combine to make it durable, trouble-proof and easy to run.

But after all the most important thing about a Cream Separator is how well it separates the cream from the whole milk. In this respect the Renfrew has no superior, as any dairyman or farmer who owns one will tell you.

The Renfrew gets 99.99 per cent of the butter-fat. It will put your dairy on a profit-paying basis and stop all butter-fat loss.

No.	Capacity per hour	Hand Operated	With Electric Motor
2.....	350 lbs.	\$80 00	\$150 00
4.....	450 lbs.	90 00	160 00
6.....	650 lbs.	100 00	170 00
8.....	800 lbs.	110 00	180 00
10.....	1,000 lbs.	120 00	190 00

When ordering with electric motor, give voltage, direct or alternating current, and, if alternating, the cycles. Can also be equipped to be operated with gasoline engine. Prices on request.

Before you buy a cream separator, call and see the Renfrew or send for descriptive catalogue

Star Cream Separator

Easiest, Cleanest, Simplest Cream Separator of its Kind on the Market. Reversible Strainer, Cover and Aerator—Inclined Bottom.

Made of the best material to be found on the market, with the most perfectly constructed bottom, allowing every particle of cream and milk to be drawn, without disturbing the can, thereby preventing all liability of remixing cream and milk after being separated.

DIRECTIONS. Place the Separator on a bench or box in any convenient place, with the front projecting over a little so that a pail can be placed under the faucet, without disturbing the can when drawing off the milk and cream.

Place cover, inside up, on Separator and pour your milk through the strainer into the Separator. In warm weather dilute with same amount of water that you have of milk; in cold weather, or if water is more than ordinarily cold, a less amount has been found to be sufficient; then replace cover after changing strainer to outside of cover and allow to stand.

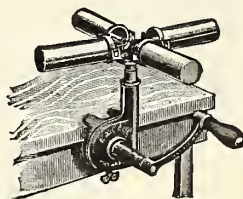
Price List—With Cover

No.	Capacity Quarts	
0. 1 cow.....	24.....	\$4 25
1. 1 to 2 cows.....	48.....	5 25
2. 3 to 4 cows.....	71.....	5 75
3. 6 to 8 cows.....	118.....	6 75
4. 8 to 10 cows.....	130.....	7 75



The Facile Jr. Babcock Milk Tester

An exceedingly simple, light, compact, and carefully designed apparatus, especially adapted to the use of the dairy, and also, on account of its light weight, to the traveling dairy inspector. The working parts consist of but two cut gears, namely, a steel spiral gear and steel spindle with worm thread, entirely enclosed in handsome cast iron case. It is fitted with deep seamless brass swinging pockets and malleable iron tinned head; absolutely safe. Hot water may be put in pockets to keep fat melted. Turns very easily without vibration or jar, and can be readily attached for operation to any table or bench. Complete with full set of glass-ware, consisting of test bottles, pipette, and acid measure, also test bottle brush and bottle of acid, with full directions for use.



2-bottle Outfit, complete for milk.....	\$8 50
2-bottle Outfit, complete for cream and milk.....	9 50
4-bottle Outfit, complete for milk.....	9 75
4-bottle Outfit, complete for cream and milk.....	10 75

Improved Champion Milk Cooler



It is a perfect aerator, removing all flavors arising from excessive cabbage, turnip, or silo rations.

It is a thorough cooler, reducing the temperature of the milk instantly nearly to the temperature of the cooling medium.

It is low down, combining greatest cooling surface with least height.

It is as simple in construction and easily cleaned as a pail—no joints or seams for the harboring of impurities and no crooked pipes to rust.

Its cost is small—compared to the saving effected it is nothing.

It saves time and labor in handling of milk for any purpose.

It is a complete deodorizer, removing the animal heat or cowny taste and all odors arising from the absorption by the milk of stable or other unpleasant gases.

It is equally well adapted to the use of any cooling medium, either running water, ice water, or if a very low temperature is not required, ordinary well or spring water.

Fast Cooling Important. It is but the work of a moment to fill the Improved Champion with cold or ice water, or attach a ½-inch stream of flowing spring water. If the agitator is used it keeps the medium circulating near the cooling surface. The milk flows over the cooling surface through machine-punched holes scientifically calebrated so that milk film is even and cooling is sure and certain.

The following sizes of the Champion are gauged as nearly as possible to take care of the milk as fast as drawn from various sized dairies with the average number of milkers. Be sure to get one large enough, as best cooling results are obtained with low pressure of milk in the receiver.

Prices Include Spring Pins for Attaching Strainer Cloth

No.	Capacity milk receiver	Size of dairy	Takes care of	Price
No. 2	18 qts.	1 to 25 cows	3 milkers	\$8 50
No. 3	34 qts.	25 to 50 cows	5 milkers	10 00
No. 4	52 qts.	50 to 100 cows	8 milkers	12 50



Thatcher Superior Quality Milk Bottles

"A bottle of milk is a bottle of health"



All bottles and capacity guaranteed to conform with state laws

Thatcher Quality Milk Bottles are made in different shapes, S, G, and H. We recommend the style S which shows deep cream line.

	Doz.	1/2 gross	Gross
Quarts	10	\$5 00	\$9 00
Pints	90	4 00	7 00
Half-Pints	80	3 50	5 90
Quarter-pints	80	3 50	5 90

Five gross lots 50 cts. per gross, 10 gross lots 75 cts. per gross and 25 gross lots \$1 per gross, less than above prices.

Name Plates \$2.50 for each size. Plates free on orders for 25 gross of one size. Orders for lettered Bottles must be for one gross or more of each size. All lettered Bottles f.o.b. factory, with freight allowance of 50 cts. per gross. Plain Bottles f.o.b. cars, Pittsburgh.

Improved Decimal Milk Scale

This spring balance is intended especially for use in connection with the Babcock Test for keeping records of the quantity of milk from individual cows, together with the per cent of fat, so as to calculate the butter-yield. The Scale is provided with a loose pointer which, by means of a thumb-screw, may be set anywhere on the dial to offset the weight of the milk pail, so this does not have to be deducted from the reading. The reading being in pounds and tenths of pounds makes the calculation very much simpler than when pounds and ounces are given, as on the ordinary Scale.

30-lb. Scale. Weighs by 1-20 lb., price, \$6.75; postpaid, \$6.90.

60-lb. Scale. Weighs by 1-10 or 1-20 lb., price, \$8.25; postpaid, \$8.40.

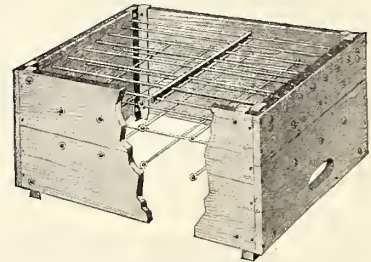
120-lb. Scale. Weighs by 1-10 or 1-20 lb., price, \$13; postpaid, \$13.15.

These same Scales can be furnished to weigh by ounces at the same prices.



Sanitary Wire Bottom Bottle Cases

The No. 12, 12-quart Case is spaced three bottles wide and four bottles long. Is well made, with all wires riveted, making a good, substantial, durable, as well as sanitary Crate at a reasonable price. Note the corner construction which rivets the entire box together. The ends and sides are of hardwood with neat hand holes. The No. 20 Case holds twenty pint bottles, four bottles wide by five long. The width and length of this Case are the same as the No. 12 quart Case and will stack one on the other, each Case being held in proper position by the corner irons.



C12. Quart Case. 12 bottles; depth 10½ inches, width 14¼ inches, length 18½ inches.....\$2 25

C20. Pint Case. 20 bottles; depth 8¼ inches, width 14¾ inches, length 18½ inches..... 2 25

A16. Pint Case. 16 bottles; depth 8¼ inches, width 14¾ inches, length 18½ inches..... 2 35

A20. Half-pint Case. 20 bottles; depth 6¾ inches, width 14¾ inches, length 18½ inches..... 2 50

25 crates or more, 15 cts. per crate less

We carry many lines of goods in stock that are not listed in this catalogue, and for this reason invite correspondence regarding the wants of our customers. If we cannot furnish the article inquired for, we will endeavor to inform the inquirer where it can be had.

Sealright Bottle Caps

Made from the Famous Fulton Board



These Caps are made from the very best grade of 35-point spruce-sulphite pulp board and are odorless and tasteless. A pure white paraffine is used for waterproofing them. The ink used for printing these Caps is especially manufactured for this purpose and will not spread or fade if bottles are submerged in water.

Printed in Red, Blue, Green, Black, or Brown. No charge made for special printing in one color in quantities of 50,000 or over. In quantities of 25,000, there is a \$2.50 electro charge on first order. Prices for special printing in quantities less than 25,000 on request.

If some special design or trade-mark is wanted a small charge will be made for the engraving. This expense, however, is charged on the first order only, and the design can be used by the purchaser on all future orders. We will furnish samples showing the different styles of printing on request.

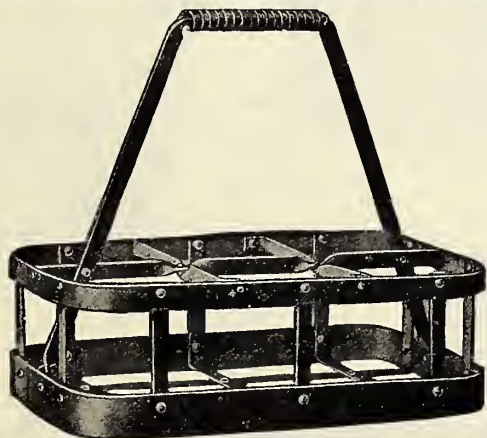
PRICES		Postpaid	
No. 2 Caps.	1,000 in pkg.	\$0 45	\$0 55
No. 2 Caps.	5,000 in box.	2 10	2 25
No. 2 Caps.	50,000 in barrel.	15 50	
No. 3 Caps.	1,000 in pkg.	50	60
No. 3 Caps.	5,000 in box.	2 20	2 35

Barrels of 50,000 Caps shipped from factory, freight allowed. We can furnish Caps in 5,000-boxes, printed Buttermilk, Cream, and Baby Milk.

Special prices will be quoted on large quantities of tube Caps for use in capping machines. Tube Caps are made from 40-point board.

Owing to the frequent changes in prices of raw materials prices are subject to change without notice.

Perfection Milk Bottle Basket



Perfection Baskets are made up of plain annealed bands. They have extra-heavy top and handle, made to last a lifetime.

	Each	Postpaid	Doz.
6-pint.....	\$1 25	\$1 35	\$13 00
6-quart.....	1 40	1 50	15 00
8-quart.....	1 50	1 60	16 00

The Certified Bottle Cap

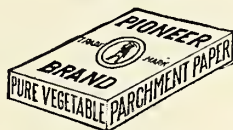


This is the Cap with the Red Flap, and is the Cap to buy if you want the highest quality and the most convenient disc Cap. The flap is not a part of the Cap, but is constructed of a separate piece of exceedingly tough manila fiber which does not tear. The Red Flap can always be grasped with ease, and never requires the aid of any mechanical implement to lift the Cap from the bottle.

Certified Caps are furnished for hand-capping, packed in cartons of 1,000 each, in boxes, barrels or tubes. Depressed Handle Certified Caps for machine capping are made from 40- to 45-point board, are dry paraffined and packed in sanitary tubes. There is no printing charge in lots of 50,000 or more, unless fancy design is ordered, requiring photo-engraving. Electro charge on initial orders of less than 50,000 is \$1.50. No printing charge on repeat orders made from the same plate. Choice of blue, red, green, black, orange, purple and golden yellow. Two-color printing, 2 cents extra per thousand.

Prices. Made of 35-point board. Per tube of 500 Caps, 60 cts., postpaid 70 cts.; 5,000 Caps \$4.25, postpaid \$4.50; 50,000 Caps in barrel, f.o.b. factory, \$39.50. Add 2 cts. per 1,000 to above prices for 40-point board. Depressed Handle Certified Caps quoted on request.

"Pioneer" Brand Parchment Paper



This genuine Vegetable Parchment Paper is guaranteed to contain no oil, grease, paraffine, or wax. It makes the best package in which to deliver butter, cheese, lard, smoked, salt, or fresh meats, fish and other products.

	Postpaid
1,000-sheet boxes, 8 x 11 inches.....	\$2 00 \$2 15
1,000-sheet boxes, 9 x 12 inches.....	2 25 2 40
250-sheet tablets, 8 x 11 inches.....	65 70
250-sheet tablets, 9 x 12 inches.....	75 80

Special prices on larger quantities

Bottle-Fillers • Bottle-Washers Wash Sinks • Butter Workers

In making up our catalogue we found that our limited space prohibited showing these articles. Special circulars and prices will be furnished on request.

Brushes for the Dairy

Hand Bottle Brushes



No. 86. Pure bristle; large size; $\frac{1}{2}$ -inch diameter, maple handle, 10 inches long. 70 cts., postpaid, 75 cts.; doz. \$7.50.



No. 72. 60 cts., postpaid, 65 cts.; doz. \$6.50.



No. 124. 65 cts., postpaid, 70 cts.; doz. \$7.



For Machine Washer

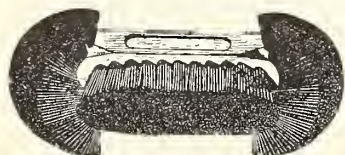
No. 125. Turbine. 55 cts., postpaid, 60 cts.; doz. \$6.



No. 100. Center Brushes for cleaning outside of bottles. \$1.15; postpaid, \$1.25.

No. 101. Outside Brushes for cleaning inside of bottles. 65 cts.; postpaid, 70 cts.

Complete Set of 3 Brushes, \$2.10; postpaid, \$2.25



Palmetto Milk Can Brush

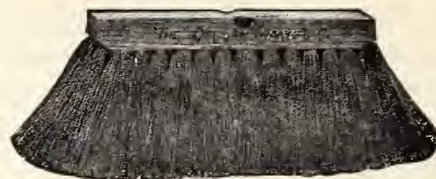
No. 08. Palmetto fibre; solid block $6\frac{7}{8}$ inches long; face $9\frac{1}{2} \times 5\frac{1}{2}$ inches. Made of an excellent grade of durable fibre, very full, with

flaring wings. 50 cts., postpaid, 60 cts.; doz. \$5.25.



Genuine African Bass Stable Broom

No. 0286. Solid block; length of stock, $5\frac{1}{4}$ inches clear; four rows, 14 inches long, complete with handle. \$1; postpaid, \$1.25.

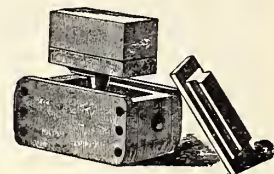


No. 500 Stable Broom

No. 500. Similar to No. 0286, with five rows instead of four; complete with handle \$1.25; postpaid, \$1.50.

Pittsburgh Butter Mould

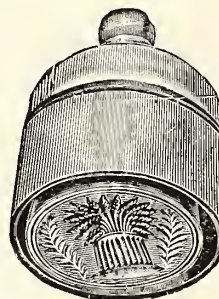
It is a very convenient shape and makes a nice-looking print, desirable for the market, and is being adopted in other sections of the country by butter-makers and packers for shipping purposes.



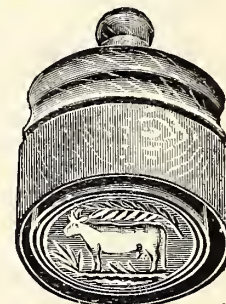
PRICES

	Each	Postpaid
$\frac{1}{2}$ -lb. prints, $3\frac{5}{8} \times 2\frac{1}{4} \times 1\frac{7}{8}$ in.	\$2 00	\$2 15
1-lb. prints, $4\frac{3}{4} \times 2\frac{1}{2} \times 2\frac{1}{2}$ in.	2 50	2 65

Block carved with sheaf of wheat design, \$1 additional.



No. 1



No. 2

Round Butter Moulds

These Moulds are made of the finest selected sugar maple, thoroughly seasoned, hand carved, and are a strictly first-class Mould. Made in 1-pound size.

No. 1. Sheaf Design. 50 cts.; postpaid, 60 cts.

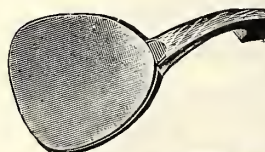
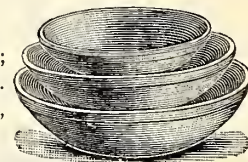
No. 2. Cow Design. Our new "Jersey Cow" Mould is a very handsome design and is an artistic piece of carving. 50 cts.; postpaid, 60 cts.

Hardwood Butter Bowls

Paraffine wax finish. Extra deep; heavy rimmed; nicely polished. 15-in.

\$1.25, 17-in. \$1.75, 19-in. \$2.50,

21-in. \$3.



Anderson Butter Ladle

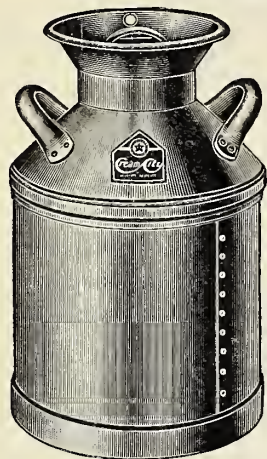
Made from white sugar maple. 25 cts.; postpaid, 30 cts.



Churn Thermometer

Glass cylinder; mercury filled tube; accurate, within one division of the scale; 8 inches long. 60 cts.; postpaid, 75 cts.

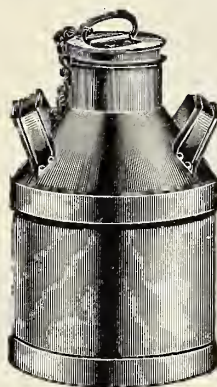
Cream City and O. M. Milk Cans



CREAM CITY

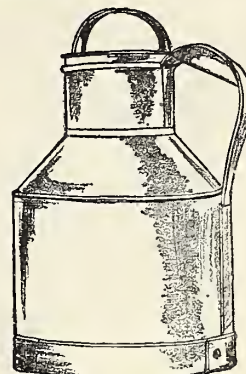
Extra-heavy seamless steel bottom, heavily coated with pure tin.

	Each	Doz.
5-gallon.....	\$3 30	\$35 50
8-gallon.....	4 00	43 50
10-gallon.....	4 25	45 00



O. M. PITTSBURGH

Lower and wider than Cream City Can. 1 1/2-inch steel bottom; hoops firmly riveted to the lower edge of body. 5-gal. \$3.75 each, \$42 per doz.



O. M. RAILROAD

Heavy hoop style; made in four sizes.

	Each	Doz.
1/2-gallon.....	\$1 00	\$11 00
1-gallon.....	1 60	17 00
2-gallon.....	1 90	20 00
3-gallon.....	2 65	28 00

Name-Plates for Milk Cans

Plates with name and address extra—less than dozen, 25 cts. each; dozen and upwards, \$2.75 per doz. Half-dozen cans at dozen rate.

Lisk Milk Cans



P-24



P-23

Made from finest charcoal plate; seamless cover and neck. Bottom reinforced with steel band. Heavy steel bail. Sanitary soldered. Full capacity.

	Each	Postpaid	Doz.
P-2302. Capacity 2 quarts.....	\$1 25	\$1 40	\$13 50
P-2304. Capacity 1 gallon.....	1 50	1 65	16 25
P-2306. Capacity 1 1/2 gallons.....	1 75	1 90	19 00
P-2308. Capacity 2 gallons.....	2 00	2 20	21 50
P-2312. Capacity 3 gallons.....	2 50	2 70	27 00
P-2404. Capacity 1 gallon.....	1 75	1 90	19 00
P-2408. Capacity 2 gallons.....	2 25	2 45	24 25
P-2412. Capacity 3 gallons.....	2 75	2 95	30 00

Half-Dozen Cans at Dozen Rate

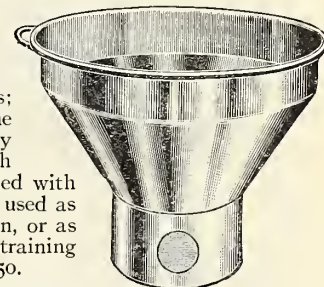
Butter and Egg Carriers for Parcel Post

For description and prices on these see page 186 and 187.

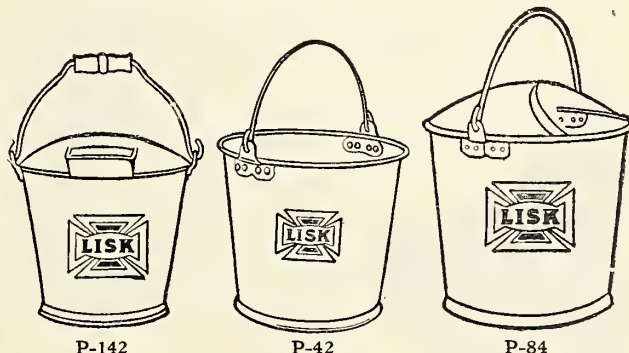
Milk Strainers

No. A-1934. Anti-Rust; seamless; body and foot drawn from one piece of metal; sanitary and easy to clean. Made with wire cloth soldered on bottom and equipped with sturdy wire foot or band, to be used as a foot when straining into a pan, or as a band to hold cloth when straining into a can. \$1.25; postpaid \$1.50.

Pittsburgh. Fitted with hoop for cloth. Heavy bright tin. Size 10 1/4-inch top, 4 3/8-inch bottom, height 7 1/4 inches. \$1; postpaid, \$1.20.



A-1934



P-142

P-42

P-84

Lisk Dairy Pails

Complying with Sanitary Dairy Laws of Various States

P-42. 14-qt. Steel-clad XX Charcoal plate, plain bail....	\$2 00
P-52. 14-qt. Ironclad XX Charcoal plate, plain bail....	1 00
P-142. 14-qt. Plain XX Charcoal plate, wood bail.....	1 75
P-84. 14-qt. Fishmouth XX Charcoal plate, plain bail...	2 50

The P84 Sanitary Fishmouth Pail is recommended by State Dairy Inspectors. Used by Borden Condensed Milk Company and other large practical dairymen.

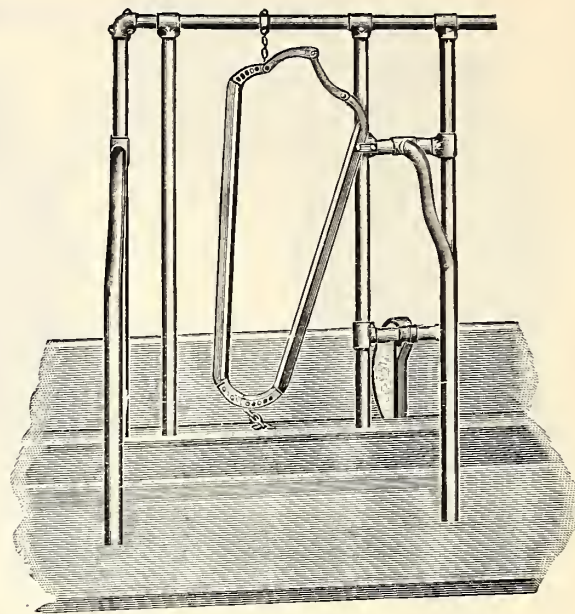
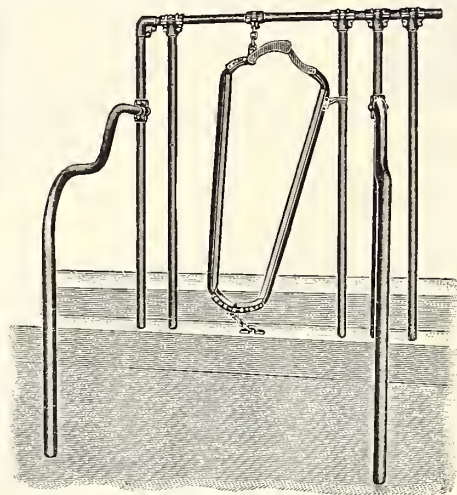
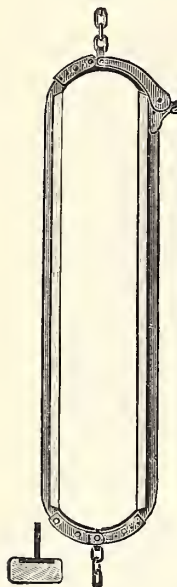
Ney Dairy Barn Equipment

The Ney No. 1 Stanchion

Wood lined—an up-to-date Stanchion

A Stanchion of recognized merit, strong, simple, and springless. Manufactured of extra-quality "T" steel, lined with well-seasoned hard maple. Made absolutely without springs. Positive lock that can not be opened by cattle. Opens full width yet always securely fastened at top so the hinge cannot be broken. Adjustable as to width.

Less than 1 dozen, each \$4; 1 dozen and upward, each \$3.75.



Ney No. 11 A Stalls

An especially attractive construction embracing every feature of known advantage. Two posts cross braced. Rigid top rail. Built of either $1\frac{1}{8}$ or $1\frac{5}{8}$ inch O. D. Steel Tubing and drop Forged Steel "T" Fittings. Standard, width 42 inches; can be varied to suit. Price, including No. 1 Stanchion $1\frac{5}{8}$ -inch tubing \$12.50; $1\frac{1}{8}$ -inch tubing \$13.25. Extra End Sections \$3.50.

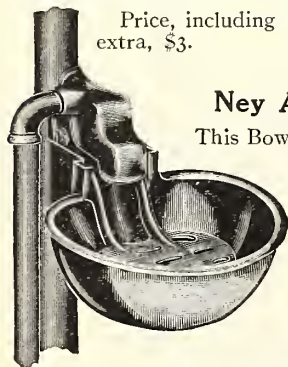
Ney No. 30A Three-Post Stall

Fitted with No. 1 Stanchion

The Three-post Stall is an exceptionally substantial Stall, made with three posts which can be set as required for different width Stalls. The distance between inside posts can be so proportioned that the cow will not put her head between stanchion and posts.

It is made of best quality, high-carbon $1\frac{5}{8}$ O. D. steel tubing. The standard width is 42 inches, but this can be varied to suit.

Price, including No. 1 Stanchion, \$12; End Section extra, \$3.

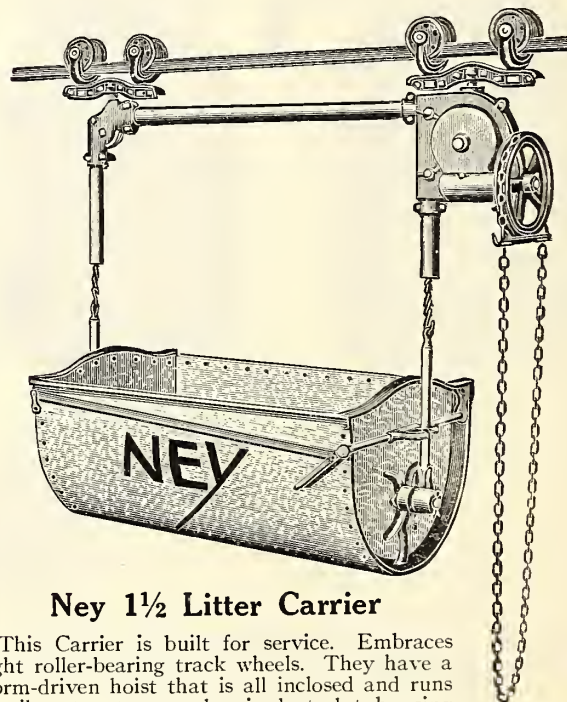


Ney Automatic Water Bowls

This Bowl is absolutely sanitary, 10 inches in diameter, smooth and round, with no corners to collect dirt. It is equipped with the hinged, dropped-clean feature and small automatic latch by which the bowl can be dropped instantly for cleaning and raised to a normal position just as easily.

Price \$4.50 each; 6 to 12, \$4.25 each; 12 or more, \$4 each.

Ask for complete catalogue of Ney Barn Equipment, showing other styles of Stanchions and Stalls, Stall accessories, Litter Carriers, Bull-Pens, and other equipment.



Ney 1 1/2 Litter Carrier

This Carrier is built for service. Embraces eight roller-bearing track wheels. They have a worm-driven hoist that is all inclosed and runs in oil, extra-strong galvanized steel tub using heavy malleable angles at ends and extra-large bearings. Price, with 8- to 10-bus. Tub, \$57; with 10-to 12-bus. Tub, \$59.50. Ask for complete catalogue and prices on track and fixtures for Litter Carrier.

Special prices on complete Barn Outfits quoted on receipt of specifications

ASK ABOUT VENTILATORS AND VENTILATOR SYSTEMS

Pilling Hard-Rubber Teat Plug



The Pilling Hard-Rubber Teat Plug is especially designed to prevent dropping of milk in cows where there is a relaxation of the little muscle at the end of the teat and consequent leakage of milk as soon as enough pressure accumulates in the udder; also to dilate the canal of the teat above the muscle in cases where hard milking is due to contraction of this part of the canal. 50 cts.; postpaid, 55 cts.

Pilling Teat Expander

The Pilling Teat Expander, of metal, nickel plated, is intended to expand and enlarge the opening of hard-milking teats. It also expands the milk canal at the same time. Easy to use. 50 cts.; postpaid, 55 cts.



Pilling Milking Tubes

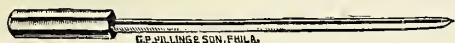
For Sore and Obstructed Teats and Hard-Milking Cows

Can be made any length by moving the adjustable slide; can also be used for a probe to pass the obstruction.

PRICES

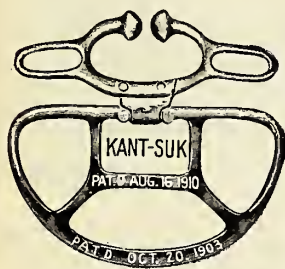
	Postpaid		Postpaid
2 1/4-inch.....	\$0 65	3 1/4-inch.....	\$0 95
2 3/4-inch.....	80	3 3/4-inch.....	1 10
		4 1/4-inch.....	1 25

Prices quoted on other Pilling Cattle Instruments on request. Send for booklet.



Pilling Teat Opener

The Pilling Teat Opener differs from the Bistoury inasmuch as the Opener is simply used as a reamer or dilator to pass the obstruction. It does not cut the obstruction as the Bistoury does. 75 cts.; postpaid, 80 cts.



"Kant Suk" Calf and Cow Weaner

Being made with a hinge joint, it swings out of the way when the calf eats or drinks, but effectually prevents sucking. It is heavily tinned, sanitary, and humane.

	Postpaid
No. 1055. Calf size..	\$0 50
No. 1056. Cow size..	60

Common-Sense Calf-Feeder

The Common-Sense Calf-Feeder is a simple, practical device which every calf-owner will appreciate and the value of which can be seen at a glance. The calf sucks his food in a natural manner, and the milk is taken into the stomach without having it form a solid, cheese-like, indigestible lump, which is frequently the case where the calf drinks directly from the pail.



	Postpaid
Single Feeder.....	\$2 00
Double Feeder.....	3 00

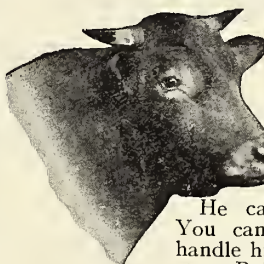
The Improved Keystone Dehorner



The Improved Keystone Dehorner is the latest and most efficient Dehorning knife on the market today. It has been altered and improved in several important points of construction, until its strength, cutting service and durability have been greatly increased.

The entire instrument is lighter, stronger, and better proportioned than former Dehorning knives. We guarantee it to be a first-class device in every way. Complete with leader, rope, extra set of blades and screws, \$18; postpaid \$18.50.

Special Circular Sent on Request



Keystone Bull Staff

Catch Him Quickly—Hold Him Firmly with the Keystone Bull Staff.

He can't get away, and he can't lunge. You can never trust a bull, but you can handle him safely and humanely with a Keystone Bull Staff.

Price \$4; postpaid, \$4.15

"Pierceasy" Bronze Bull Ring

This is "the Ring with a point." It cuts a clean hole and is made in three sizes.

	Postpaid
No. 1. 2 3/4 x 1 5/8 in...	\$1 50
No. 2. 2 7/8 x 3 3/8 in...	2 00
No. 3. 3 1/4 x 1 7/8 in...	2 30



"Bullchane" Pacifier

If you own a bull that's at all hard to handle, you need Wagner's "Bullchane" Pacifier. Subdues most vicious animal without any harmful effects whatsoever.

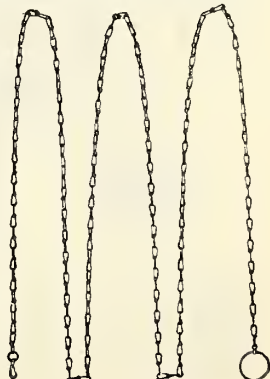
Cannot twist because it has swivels every 2 feet. Snaps in nose ring and makes finest kind of "hitch" or leader. Strong and long-wearing—and just heavy enough to effectually "tame" the ugliest animal. A boon to stock raisers. \$2.00; postp'd, \$2.10.

Tie-Out Chain

Our Tie-Outs are all made with large swivel malleable iron stake ring, swiveling snap, and a swivel every 10 feet.

20-ft. Chain, 75 cts.; postpaid, 85 cts.; 30-ft., \$1; postpaid, \$1.10.

Each Tie-Out Chain is packed in a neat and substantial bag.





NON-POISONOUS DEODORANT STERILIZER

Kills Bacteria • Banishes Odors

IN

MILK UTENSILS, MILKING MACHINES
SEPARATORS, CANS, PAILS

Easy and cheap to use. Praised by dairy officials for over twelve years

Disinfects • Treats

Calf Scours, Retained Afterbirth, Roup, White Diarrhea
All Hog, Herd or Poultry Diseases



Kills germs that cause disease. Heals,
Restores healthy action

FREE BULLETINS ON ALL USES

Sold on Money Back Guarantee. We Recommend It

PRICES

Qt.	\$1 25
Gal.	3 00
5 gals.	12 50

(Dilute with water according to directions)

"KNOX OUT" FLY SPRAY STOCK LICE KILLER CHICKEN MITE CHASER

DISTINCTIVE FEATURES



1. No bad odor.
2. Clean, clear, light color.
3. Is not sticky.
4. Will not taint milk.
5. Will not discolor cattle.
6. Will not burn cattle.
7. Does not gum hair.
8. Will not clog sprayer.
9. Costs no more than others.
10. Sold on money back guarantee.
11. Ingredients will not separate.
12. Not made of any by-products, contains no tar oil, or sheep dip.
13. Ingredients 100% active — no inert material

We Highly Recommend Knox - Out

	Postpaid	
Quart can.....	\$0 60	\$0 75
Gallon can.....	1 50	1 80
5-gallon can.....	6 75	
30-gallon drum.....	35 20	

Wyandotte Cleaner and Cleanser

Wyandotte Dairyman's Cleaner and Cleanser is used in all dairy countries of the world, and in the United States and Canada 85 per cent of the butter and cheese-makers use it daily. To this large number can be added the thousands of farmers, dairymen, and milk dealers who are steady patrons.

It contains no soapy grease, makes no soapy suds, nor resembles soap agents in any way. It is a sanitary cleaner made purposely to do the work of cleaning milk utensils and containers.

PRICES

5-lb. sack.....	\$0 45	Postpaid \$0 55
80-lb. keg (bulk).....	5 25	
280-lb. bbl. (bulk).....	14 90	

Shoo-Fly

THE ANIMALS' FRIEND



Shoo-Fly is an insecticide, germicide, anti-septic and disinfectant, being a liquid compound (free of water or gummy substances) absolutely harmless to man or beast and exceedingly obnoxious to flies and insect-pests. Not objectionable to man. Cures all sores from bottom, without much scab. Kills all lice and mites in poultry-

house or wherever sprayed. No flies, warbles, mosquitoes, Buffalo gnats, ticks or vermin on horse or cow, and one-third more milk where Shoo-Fly is sprayed. Thousands of testimonials. Postpaid

Quart can.....	\$0 75	\$0 90
Gallon.....	1 50	1 80
5-gallon can.....	7 00	

Conkey's Fly Kicker

Every stockman, every dairyman needs Fly Kicker. Don't let flies torment your horses; don't let them worry your cows. Cows give more milk and butter-fat and horses work easier when you save their energy by keeping off those winged pests.

Quart.....	\$0 60	\$0 75	Gallon.....	\$1 50	Postpaid \$1 80
2 quarts.....	90	1 10	5 gallons.....	7 25	

SAL-VET

Sal-Vet
(MEDICATED SALT)

This is composed of sulphate of iron, sulphur, quassia, gentian, carbonized peat, charcoal, epsom salts, and tobacco coated on grains of salt, by a special process. Salt provides the "voluntary feeding principles." Farmers should salt their stock with Sal-Vet, thus giving them the medication to keep out worms, strengthen digestion, and make more profit out of their feed. It is sold on a positive guarantee. A hundred testimonials right from his own neighborhood will be mailed to any farmer on his application.

10 lbs.....	\$1 00	\$1 20	50 lbs.....	\$4 00
25 lbs.....	2 25	2 65	100-lb. keg.....	6 75

Cows' Relief

Cows' Relief is one of the greatest remedies ever compounded for cattle and is worth its weight in gold to the farmer or dairyman, as it is a specific remedy for caked bag and all teat troubles.

PRICES

Small size. 50 cts.; postpaid, 55 cts.
Large size. \$1; post- paid, \$1.10.



Kow-Kare

The great cow medicine for abortion, barrenness, scouring, bunches on the udder, red water, and "off feed." Kow-Kare assists nature, makes pure blood, corrects stomach disorders, improves appetite, and being a safe and powerful tonic, makes a larger flow of milk.

PRICES

Small Size.....	Postpaid
Large Size.....	\$0 65
Half-do. Large Size for \$6.25.	I 25

Bag Balm

We recommend Bag Balm for all diseases of udder and teats, caked bag, sore teats, bunches, chapping, cuts, inflammation, etc. It makes easy milkers of hard ones and keeps all the parts in a sanitary, healthful condition. 60 cts.; postpaid 70 cts.



What Dairymen Tell Us —

About their success with KOW-KARE—the great cow medicine—makes us feel perfectly safe in putting our own endorsement back of it. We'd like to see this great remedy in every barn for the prevention and relief of such cow ailments as Barrenness, Abortion, Retained Afterbirth, Scouring, Bunches, Milk Fever, Loss of Appetite, etc.

BAG BALM is equally reliable for all exterior sores, cuts, chaps, caked bag, swellings of the udder, etc.

Write for "The Home Cow Doctor." Free

DAIRY ASSOCIATION CO.

Lyndonville, Vt. .



O. H. Cow Tone

The result of years of experiment, research and study. It is to be used in cases of abortion, barrenness, retained afterbirth, red water, garget, dysentery, bloat, or hoven. In the treatment of such cases it has no equal in the world and you should keep it on hand and use it as directed. Cow Tone stimulates the processes of digestion and elimination, establishes the health and tone of the animal so that a noticeable increase in the flow of milk follows its use on cows that are confined in stables during the winter.

Postpaid

Small Size.....	\$0 50	\$0 60
Large Size.....	I 00	I 15

Blackman's Medicated Salt Brick

The Best and Most Convenient Stock Remedy Known

WHAT IT DOES

Aids digestion; removes worms; purifies the blood; cures skin diseases, kidney, stomach and bowel trouble; prevents colic, blind staggers, heaves, Texas fever, lampers, murrain; creates a healthy appetite; tones up the system; removes old coat of hair and brings out the new.

WHAT IT DOESN'T DO

Doesn't get old and wormy; doesn't lose strength with age; doesn't get eaten up by mice and rats; doesn't have to be hunted up and dosed out at feeding time (often in the dark) as do other remedies, for after being placed in the feed-box or holder it is always where stock can get it as they need it.

BETTER AND CHEAPER THAN STOCK POWDERS

Blackman's Medicated Salt Brick contains absolutely nothing but dairy salt mixed with sulphur for a blood purifier, copperas for worms and the bowels, saltpeter for the kidneys, and nuxvomica, one of the best known tonics.

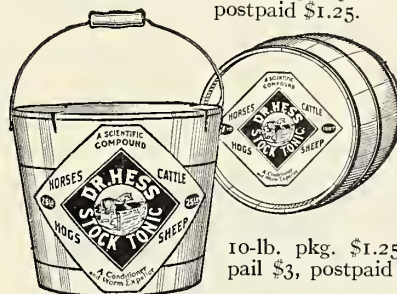
25c. per Brick, postpaid 30c.; doz. Bricks \$2.75, 2 doz. Bricks \$5.25

Calves' Cordial

One of the best remedies ever prepared for the treatment of scours in calves and cows, also a valuable remedy for stomach and bowel disorders. It acts as an astringent upon the digestive tract, soothing the inflamed tissues and removing the fevered condition. Large size 50 cts.; postpaid 55 cts.

Corona Wool Fat Compound

For Scalds, Burns, Cuts, Wounds, Cracked and Chapped Hands, Frosted Feet, White Diarrhea of Baby Chicks, Caked Udders, Sore Teats, Sore Shoulders, Cuts and Scratches, Cracked Hoofs. Keep a can in the house and barn. Use it for any sore or wound on man or beast, and you will find it "worth its weight in gold." 8-oz. can 60 cts., postpaid 65 cts.; 20-oz. can \$1.20, postpaid \$1.25.



Dr. Hess' Stock Tonic

A conditioner and worm-expeller with minerals added for Horses, Cattle, Hogs, and Sheep. 3½-lb. pkg. 50 cts., postpaid 65 cts.; 10-lb. pkg. \$1.25, postpaid \$1.50; 25-lb. pail \$3, postpaid \$3.40; 100-lb. drum \$10.

Pratt's Animal Regulator

A tonic for Horses, Cattle, Sheep, and Hogs. Pkgs. 25 cts., postpaid 30 cts.; 50 cts., postpaid 60 cts.; \$1, postpaid \$1.20; 12-lb. pail \$2.15, postpaid \$2.40; 25-lb. pail \$3.40, postpaid \$3.80.

Pratt's Dip and Disinfectant

Qt. 55 cts., postpaid 70 cts.; 2 qts. 90 cts., postpaid \$1.10; gal. \$1.50, postpaid \$1.80.

Pratt's Cow Tonic

A regulator and medicinal tonic. Pkgs. 50 cts., postpaid 60c.; \$1, postpaid \$1.20; 12-lb. pail \$2.50, postpaid \$2.75; 25-lb. pail \$4.50, postpaid \$4.90.

Pratt's Hog Tonic

A digestive tonic, bowl regulator, worm-expeller, and fattener. Pkgs. 50 cts., postpaid 55 cts.; \$1, postpaid \$1.10.

Retsof Rock Salt

The genuine Retsof Rock Salt in lumps weighing from 5 to 15 pounds each. 50 lbs. \$1.35, 100 lbs. \$2.35, 280 lbs. (barrel) \$4.50.

Star Medium Dairy Salt

10-lb. sack 25 cts., 25-lb. sack 50 cts., 280-lb. bbl. \$4.75.

Semi-Solid Buttermilk

For Hogs, Calves and Poultry

KEEPS THE HOGS HEALTHY AND MAKES THEM GROW FAST

Buttermilk is Nature's cheapest and most valuable feed because of its high content of proteins, carbohydrates, lactic acid, butterfat, and mineral salts. These are the elements recognized by all authorities on feeding and proved, through long experience, by hog-raisers, to be the most valuable in increasing weight quickly.

Semi-Solid Buttermilk is pure, rich buttermilk with the water taken away. Raw buttermilk by analysis is about 93 per cent water. Semi-Solid Buttermilk, as the name implies, is a semi-solid concentrated or condensed buttermilk. In other words, it is fresh, wholesome buttermilk containing about 6 per cent lactic acid with all the feeding values that the richest buttermilk contains—with the water content taken away to save bulky handling and freight expense.

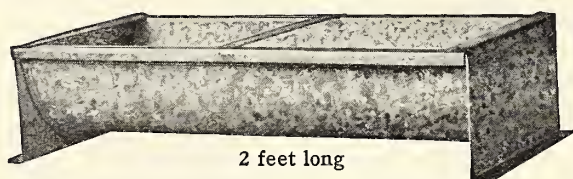
Semi-Solid Buttermilk is one of the very best helpers the hog-raiser can possibly get. It makes boars more potent and sows more prolific. It makes the farrowing easier and safer, and the pigs are ready to fight for a teat as soon as they are farrowed. Semi-Solid Buttermilk is the pig's best friend at weaning-time, for that is a critical time in a hog's life. It makes the change from sow's milk so easy that the pigs keep right on growing without as much as losing their baby fat.

The regular feeding of Semi-Solid Buttermilk in a dilute form keeps the herd free from worms and makes the largest possible gains from every pound of feed consumed.

A little Semi-Solid Buttermilk fed regularly goes a mighty long way to make hogs healthy, thrifty, and profitable.

For details regarding Semi-Solid Buttermilk as a poultry feed see page 195. Ask for special circular and testimonials.

Superior Hog Trough



2 feet long

These are made of extra-heavy galvanized steel with riveted corners and brace, and spot welded ends. Joints well soldered. Price 90 cts. each, postpaid \$1.10; \$5 per 1/2 doz., \$9 per doz.

Blatchford's Calf Meal

Blatchford's Calf Meal is absolutely the only milk-substitute which contains all the elements the calf requires for rapid and healthy growth.

Blatchford's Calf Meal is the Original Calf Meal. It was the first on the market. For practically forty years it has been consistently used in the United States by a constantly increasing number of farmers and dairymen.

It is the only Calf Meal that is thoroughly cooked and prepared for digestion. It is easy to feed. Calves relish it.

It supplies in easily assimilated form all the food elements necessary for rapid growth, early maturity, thrift and health.

It is strictly a quality product. Only the very best materials are used in its manufacture.

Blatchford's Calf Meal is absolutely the only milk-substitute which contains all the elements the calf requires for rapid and healthy growth.

Darling's 60 Per Cent Protein Digester Tankage

Darling's Digester Tankage builds bone and muscle on young pigs, and matures a hog for market from two to three months earlier than corn alone. Hogs that are fed with it are better proportioned—more lean and less fat. They are sound, and ship well with surprisingly small shrinkage.

Stock Feeds

We make a specialty of supplying our customers with high-grade stock feeds and concentrates of which the following is a partial list:

Buffalo Gluten Feed	Dried Beet Pulp
Digester Tankage	Unicorn Dairy Ration
Oil Meal, Old Process	Cotton Seed Meal
Flaxseed Meal	Blatchford's Calf Meal
Whole Flaxseed	Alfalfa Meal

Special price-list sent on request

RAX



Saves Money by Saving Crops

It is estimated that rats and mice consume grain each year in the United States alone to the value of more than \$10,000,000. Most of this waste can be saved if Rax is given a chance.

Rax Is Not a Poison.—While it is absolutely deadly to rats and mice, it is *harmless to human beings, domestic animals, poultry and birds.* It may be used anywhere with complete safety.

Rats Leave Before They Die.—Within a few days after eating bait prepared with Rax, rats and mice become feverish and seek the open air where they die—outdoors. Price, 75 cts. per bottle, postpaid.

Rat Corn



Will exterminate Rats, Mice and Gophers from your premises in a safe, sane and sanitary manner.

NO ODORS OR SMELLS

It mummifies them. No matter where they die they simply DRY UP. Positively do not smell.

Rat Corn is a new and scientific discovery, and without a doubt the greatest rat-destroyer in the world; the only one that kills rats without any bad, dangerous or disagreeable effects. A trial will convince you. 25 cts., 50 cts., and \$1 per can, postpaid 6-lb. pail \$5, express prepaid.



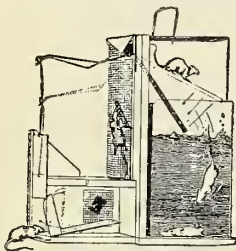
After eating Rat Corn he is mummified

FOR PRICES ON ABOVE FEEDS SEE OUR MONTHLY FEED PRICE-LIST ACCOMPANYING THIS CATALOGUE

PEERLESS RAT AND MOUSE TRAPS

This Trap Catches and Kills Continually!

Every Rodent Sets the Trap for Its Follower



"PEERLESS" MOUSE TRAP

Height, 10¾ inches; width, 4 inches; length 10 inches; weight, 3 pounds packed.

Price \$3 each, f. o. b. Pittsburgh

More Testimonials Unsolicited. What Better Proof Can be Had?

"About six months ago we bought twelve of your Mouse Traps. Up to date we have caught 1,200 mice. We consider this wonderful. We had our warehouse fumigated about five years ago and got, in one night, 750 mice, but we paid \$150 for the job. Both plans are good, but yours is cheaper." F. W. Bolgiano & Co., Inc., Seeds, Washington, D. C.

NEIL HOUSE

Columbus, Ohio

James T. Clyde, Manager
I. W. Scott Company,
500 Liberty Avenue,
Pittsburgh, Pa.

Gentlemen: Acknowledging receipt of yours of the 5th inst., beg to say that we have had the greatest success with your Peerless Automatic Rat Trap. This old house, which, by the way, is to be torn down January 1, 1923 (to be replaced by a big new hotel) has been infested with rats, and we have tried many traps, with little success, but with the "Peerless," wise old rats that paid no attention to the others, "fell for it." In fact, we had one great big old fellow that got into the Trap but stayed on top and would not drop into the water, but we got him just the same.

This Trap has been most effective, and to its use we attribute the greatest success in cleaning out these pests. We take pleasure in recommending it to all afflicted as we were.

Very truly yours,
NEIL HOUSE,
(Signed) James T. Clyde,
Manager

The "PEERLESS" Always-Set Trap is the scientific means of dealing death to sneaking, wily rats and mice. It is positively automatic in operation, and, barring accidents, cannot get out of order. It leads the animal to certain death, and each one killed sets the trap for another to follow. That "Peerless" Traps are infallible is evidenced in their adoption as standard equipment by the most exacting industrial establishments in the country.

It has been well said that "PEERLESS" Traps are a woe to rats and mice. Joy to the man who brings woe to the pests. These abominable creatures live among conditions of the most sordid, pestilential filth. They come forth from their haunts to nibble their ways through and into the foods of human beings and omnivorous animals everywhere.

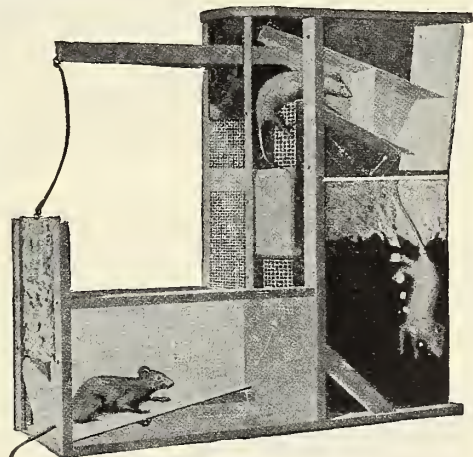
Their breath, saliva, and coats of fur are laden with germs and dirt that spread disease in their path. Increasing, as they do, out of sight and stealthily crawling forth to feed, their numbers are never fully apparent.

They must be stopped—caught—killed. Their haunts must be made untenable. The only SURE preventive of the rapid spread of the rodent scourge is a positive means of capturing and killing the animals. The individual protection of life and property depends upon taking these steps now to reduce the enormous losses which result from their inroads and almost incalculable increase in numbers.

There is one SURE way—
Equip your premises with
"PEERLESS" TRAPS.

COMBINATION OFFER

We will deliver both Traps, freight prepaid, to your station for \$10.



"PEERLESS" RAT TRAP

Height, 25½ inches; width, 7 inches; length, 26 inches. Made of wood, galvanized iron, tin, and the best galvanized wire netting.

Price \$8.50 each, f. o. b. Pittsburgh

"If a man can write a better book, preach a better sermon or make a better Mouse Trap than his neighbor, though he build his house in the woods, the world will make a beaten path to his door."—HUBBARD.

"We have used six of your Mouse Traps since the third of February and have caught 430 mice to date, and have caught as many as twenty (20) in one trap in twelve hours."—ZELT BROS., Ft. Wayne, Ind.

A COMPLETE LINE OF BEE SUPPLIES



The Largest Bee Supply Factory in the World

WRITE FOR 1927 CATALOGUE

Profitable beekeeping requires that the best kind of bees be kept in modern hives with movable frames, that all equipment is interchangeable, and that proper bee-space be provided.

The A. I. Root Company, leaders in the manufacturing of bee supplies for over half a century, and today the largest bee-supply manufacturers in the world, are represented by us in this territory. It is a pleasure for us to sell Root Quality Bee Supplies, and their guarantee assures you of absolute satisfaction.

Our big 64-page catalogue of Root Quality Bee Supplies will be mailed free to all interested persons. Just write for it. We quote you factory price on a complete line of bee-supplies.

The Buckeye or Root's Double-Walled Packed Hive

will permit the bee-keeper to winter his bees successfully around Pittsburgh. Makes possible early brood-rearing, and this provides a strong colony for the honey-flow. Takes standard equipment. Comes with metal cover (telescopes), inner cover, chaff-tray, bottom-board, Hoffman frames.

Cat. No.	DESCRIPTION	Quan.	Wt. lbs.	Price
G22102	Buckeye Hive complete, no foundation.....	1 KD	43	\$6 50
G22105	Buckeye Hive complete, full sheets foundation.....	1 NP	49	12 80

One-Story Standard Hive, with Metal Cover—10-Frame

This Hive is the one most generally used by the largest honey-producers on account of its light weight and the ease with which it may be moved from one location to another. It is of highest quality throughout, being made of best selected white pine, perfectly milled and fitted together.

This Hive is 16 $\frac{1}{4}$ x 20 inches, and 9 $\frac{9}{16}$ inches deep, outside measurements.

Hives in the flat are furnished with nails, tin rabbets, reversible bottom-board, metal cover, with inner cover, Hoffman frames. Write for price on eight-frame size.

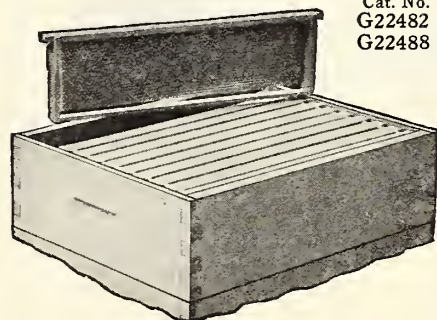
Cat. No.	DESCRIPTION	Quan.	Wt. lbs.	Price
G22202	Standard Hive complete, no foundation.....	1 KD	34	\$3 60
G22203	Standard Hive complete, no foundation.....	5 KD	155	16 40*
G22205	Standard Hive complete, full sheets foundation.....	1 NP	35	7 80

*Packed in four packages.

Root Hive-Bodies—10-Frame

What is said about the Root Hive applies, of course, to Root Hive-Bodies.

The standard dovetailed Hive is of Langstroth dimensions, 10-frame size, and measures 16 $\frac{1}{4}$ x 20 inches and is 9 $\frac{9}{16}$ inches deep. The Hive-Body may be used either as a brood-chamber, i. e., the lower story of the Hive, or as a full-depth upper story or super for extracted honey, thus forming a two-story Hive. Nails and tin rabbets included with bodies. No division-board.



Cat. No.	DESCRIPTION	Quan.	Wt. lbs.	Price
G22482	Standard Body with frames, no foundation.....	1 KD	14	\$1 90
G22488	Standard Body without frames.....	5 KD	47	4 20

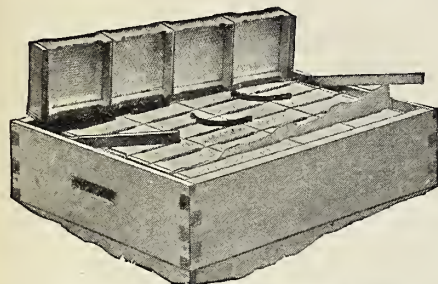
Shallow Extracting Supers (5 11/16 inches deep)

This Super is largely used in the production of chunk honey. It is also used for producing extracted honey in shallow frames, two of these frames fitting together in an extractor comb pocket of 12-inch width. Two of these Supers may also be used as one brood-chamber Hive, and any style of Super may be used above for comb or extracted honey. This Super is also used for section-holders holding 4 x 5 sections. This is our regular extracting Super, 5 $\frac{11}{16}$ inches deep, and is furnished with shallow Hoffman frames, 5 $\frac{3}{8}$ inches deep, without foundation. No tin rabbets or division-boards furnished.

Cat. No.	DESCRIPTION	Quan.	Wt. lbs.	Price
G22522	10-Frame Super with shallow frames, no foundation..	1 KD	9	\$1 20
G22523	10-Frame Super with shallow frames, no foundation..	5 KD	42	4 80

Above prices do not include postage. For postpaid prices on mailable articles, use the weight given in connection with each article. Refer to inside front cover page for rates

THE BEST YOU CAN BUY



4 1/4 x 4 1/4 x 1 7/8 Beeway Section Super

Beeway Section Super (4 1/4 x 4 1/4 x 1 7/8)

This Beeway Section Super, 4 3/4 inches deep, is most commonly used. It takes slotted section-holders, slotted wood separators, follower, and springs, and is furnished with or without sections, and with or without inch foundation starters. It may be used on any of our single or double-walled hives, tiered up one or more high.

After the Supers are filled, ready to be removed, a bee-escape board should be used to free the Super of bees.

Super complete without sections includes nails, flat tins, end-stops, Super springs, slotted section-holders, slotted separators, and follower.

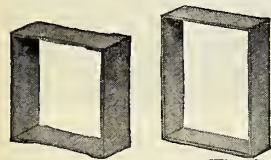
Cat. No.	DESCRIPTION	Quan.	Wt. lbs.	Price
G22542	10-frame Super, without sections or foundation.....	1 KD	8	\$1 20
G22543	10-frame Super, without sections or foundation.....	5 KD	42	4 80
G22545	10-frame Super, with sections, full sheets.....	1 NP	11	2 85

Plain Section Super (4 x 5 x 1 3/8)

We recommend this Super in preference to any other comb-honey Super that we sell. It is a deeper Super (5 11/16 inches), and is fitted with section-holders and M fences with end stops and springs. The regular 16 3/4-inch ten-frame width will easily admit eight section-holders and eight fences with Super springs.

Super complete without sections includes end-stops, section-holders, fences, Super springs, flat tins, and nails.

Cat. No.	DESCRIPTION	Quan.	Wt. lbs.	Price
G22552	10-frame Super complete, no sections or foundation.....	1 KD	11	\$1 80
G22553	10-frame Super complete, no sections or foundation.....	5 KD	50	7 80
G22554	10-frame Super with sections, 1-inch starters.....	1 NP	13	3 00



Section Honey-Boxes

Our Honey Sections are high grade and of fine appearance, cut from clear basswood. They are smooth and highly polished. Sold only in full crates.

Quan.	4 1/4 x 4 1/4 x 1 7/8 in.	Wt. lbs.	Price	4 x 5 x 1 3/8 in.	Wt. lbs.	Price
100	G2440....	7	\$1 30	G2450.....	6	\$1 20
250	G2441....	18	3 20	G2451.....	15	2 95
500	G2442....	35	6 25	G2452.....	30	5 75
1000	G2443....	70	12 50	G2453.....	60	11 50

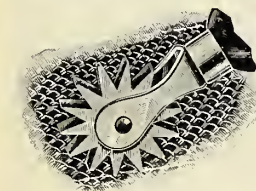


Root Foundation-Fastener

The cut at the left shows the Root Foundation-Fastener with lamp. It is a very rapid tool and gives excellent results where a cheaper tool is wanted. G415, Root Fastener with lamp, (wt. 8 ozs.), 60 cts. each. G416, Root Fastener without lamp, (wt. 2 ozs.), 20 cts. each.

Porter Bee-Escapes

In taking off honey the Bee-Escape is the greatest labor-saver ever invented. It frees the supers of bees so that no shaking of heavy supers or smoking is necessary. G411, Porter Double Escape, without board, 18 cts. each. G22676, Porter Board with Double Escape, nailed (weight 2 lbs.), 63 cts. each.



Spur Wire-Imbedder

This is an excellent device for imbedding the wires of frames into the sheets of foundation. The teeth are broad and blunt so there is no danger of weakening the foundation.

G401, Spur Wire-Imbedder (weight 3 ozs.), 25 cts. each.

Wire for Frames

This Wire is used to hold foundation or combs securely in the frames, and at the same time reduce the danger of sagging. 670 feet are required for 100 Hoffman frames. G447, 1/2-lb. spool tinned wire, 700 feet, 28 cts. each.



Airco Comb Foundation SINGLE PLY FOUNDATION

Genuine Airco Process Foundation, made into clear tough sheets from finest quality beeswax. Brood Foundation is cut in sheets size 7 7/8 x 16 3/4 inches; Super Foundation sheets are 3 7/8 x 15 3/4 inches and 3 11/16 x 14 1/4 inches.

The package numbers in the following price-list are for medium brood sizes, 7 7/8 x 16 3/4, and for thin super sizes, 3 7/8 x 15 3/4 only.

	Medium	Per pkg.	Thin	Per pkg.
1-lb. box	G5111.....	\$0 90	G5331.....	\$0 98
2-lb. box	G5112.....	1 74	G5332.....	1 90
5-lb. box	G5113.....	4 25	G5333.....	4 65

THREE-PLY FOUNDATION

The strength is in the Comb. The best Brood Foundation made—non-sagging, non-stretching, non-warping, all worker cells, no gnawing around wires.

Medium Brood for Hoffman Frames (8 x 16 3/4).

1-lb. box	G5001.....	\$0 95
5-lb. box	G5003.....	4 50

Smokers

The latest improved model has anti-spark tube, which provides a safe force draft, has long-life flexible hinge, and wire handle, that is always cool. G423, Standard Tin Smoker, with 3 1/4-inch fire-box (weight 2 lbs.), \$1.15 each.



Queen Excluders

Queen Excluders are used to confine the queen to the brood-chamber, and are very generally used in the production of extracted honey. G4241, 10-frame 7-wire and wood, 16 3/4 x 20 inches (weight 3 lbs.), 70 cts.

Root Bee-Veils

Root indestructible Bee-Veil, made of highest grade, dead-black wire cloth, is comfortable and snag-proof. Can be worn on any hat. Root Indestructible Bee-Veil, weight 1 lb. \$1.00
G253 Veil, cotton tulle throughout, weight 3 ozs. 90

Root Collapsible Bee-Hat

Designed especially for beekeepers' use. G256, Root Bee-Hat (weight 4 ozs.), 90 cts. each.

Above prices do not include postage. For postpaid prices on mailable articles, use the weight given in connection with each article. Refer to inside front cover page for rates



Our Poultry Supply Department

Pennsylvania's Poultry Industry

THE extensive development of Pennsylvania's commercial poultry industry is indicated by the fact that there are 2,160 flocks containing 500 or more birds. Both farm and commercial poultry-keeping are constantly expanding in Pennsylvania.

The abundance of excellent local markets and the closeness of the best large markets in the world provide a most substantial basis for a profitable poultry industry.

"Let the Chickens Pay the Taxes"

The value of eggs and poultry produced in Wisconsin in 1925 was estimated at thirty-eight million dollars. The general rural property tax levied in Wisconsin for 1925 was thirty-three million dollars. When the poultry income already pays the general rural property tax levied in a state like Wisconsin, think what the possibilities will be if poultry-raising is generally improved and conducted along modern lines.

John P. Hayes, of the Wisconsin Poultry Department, asks "Why not have a poultry flock that will pay the taxes on each farm?" We submit the same question for the consideration of every Pennsylvania farmer.



DAY-OLD CHICKS

We make a specialty of furnishing our customers with Day-Old Chicks of all leading breeds, from high-bred stock. Beginning early in March, we receive daily shipments from nearby hatcheries. When you are ready to place your order for chicks, let us know the breeds, the number of chicks, and the delivery desired, and we will quote you prices. Also pullets in the fall and early winter.

Incubators and Brooders

The Incubators and Brooders offered in the following pages have been selected for their proved efficiency as hatchers and chick-raisers. They are the products of the oldest and most successful manufacturers—the pioneers who blazed the way and by their untiring efforts have made artificial incubating and brooding the great success they are today.

We have space for but meager descriptions in this catalogue but will mail a complete catalogue of any particular line on request.

The Prairie State Sand-Tray Diffusion Incubators

Prairie State Incubators were the first uniformly successful Incubators on the American market. They are of the hot-air type and have incorporated in their design the three essential principles which originally distinguished them in the first year of their construction (1881)—top-radiant heat, down-draft ventilation, and applied moisture.

Prairie State Sand-Tray Diffusion Incubators, having for twelve years been the criterion of modern incubator construction, the 1925 models are presented unchanged in principle, more perfect in minor details than ever before, fully warranted as to materials and construction, and prepared to maintain the Prairie State lead in unexcelled hatching efficiency.

Description. The case is double, consisting of outer case, built of cypress—the most durable wood known under all conditions of climate and atmosphere—and an inner case, or egg-chamber, of soft tongued and grooved lumber. The space between is entirely filled with cotton batting, making perfect insulation, and saving oil consumption by retaining heat. Outer case is twice sanded and shellacked, finished with high-luster varnish, and in appearance the Incubator may stand beside high-grade household furniture.

The heater is of new design, giving 20 per cent greater efficiency than any Prairie State Heater ever before used, with much reduced oil consumption and eliminating all complaint incidental to smoking. Lamp is of galvanized steel, with Miller Sun Hinge burner, guide-ring, and self-centering metal chimney. Entire heater is strong, gas-tight, and fool proof.

The Prairie State Eddy-Current Distributor, patented, located at top of egg-chamber, breaks up the heated air-current as it enters the machine, and distributes heat to all parts by eddy-current. Distribution is automatic and self-evening, insuring uniform heat under wider ranges of outside temperature than under any other system. No sloping or bagged egg-trays necessary. No faulty distribution or hot centers.

The regulator consists of zinc and steel thermostat, strong and sensitive, operating by positive thrust the lever-bar on incubator top which raises and lowers the heater exhaust valve. Temperature is controlled within a fraction of one degree. Thermostat is



Prairie State Diffusion No. 1
150 Eggs

located above egg-level, and upon its center line absolutely uniform temperature is maintained, regardless of outside weather.

Ventilation is positive and free, effected by combining heating and ventilating currents, by which pure, fresh, warmed air from outside, through the heater, is constantly forced through egg-chamber—a distinctive Prairie State method.

Moisture automatically supplied throughout hatching period by famous Prairie State Sand-Tray. The sand-tray is a galvanized steel pan located on floor of egg-chamber and kept filled with wet sand. Thus moisture is supplied by evaporation underneath the eggs, so preventing evaporation from the eggs themselves and instituting conditions approaching those in a natural nest stolen upon the ground. Relative humidity in egg-chamber approximately 60 per cent, as under the hen.

The nursery, the floor of which is the egg-chamber bottom, is deep enough to allow ample headroom for chicks or ducklings. Floor is smooth, and dust and filth cannot collect.

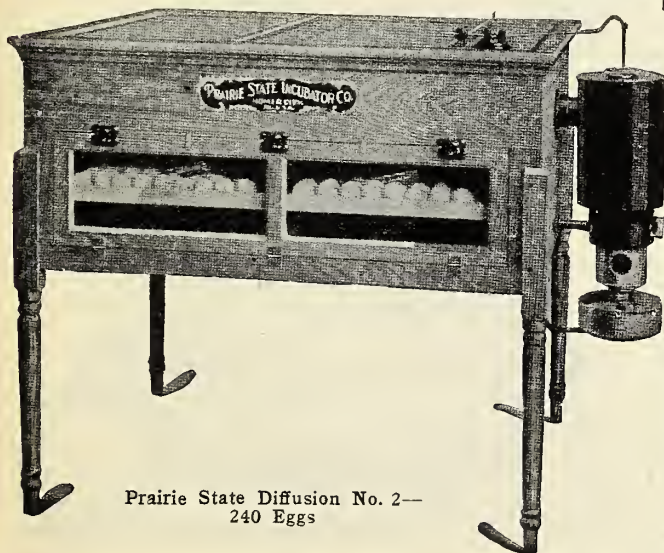
Egg-trays are of light basswood with galvanized wire-cloth bottoms, strong and durable. Front ends have removable drops for chicks to pass into nursery. A burlap mat rests on nursery floor to receive chicks after removal of sand-tray at close of hatch.

Entire Incubator is built of highest grade materials, lumber, steel and cast iron. Nothing to rust out or deteriorate. Double glass in non-warping doors.

The operation is sanitary. No cloths, felts, or screens to collect dust and effluvia. All such accumulation, with down or other dirt, is removed with the sand-tray at close of hatch.

A Prairie State Incubator Is a Permanent Profitable Investment

No. 0, 100 eggs, weight crated, approx. 125 lbs.....	\$30 00
No. 1, 150 eggs, weight crated, approx. 160 lbs.....	37 50
No. 2, 240 eggs, weight crated, approx. 245 lbs.....	52 50
No. 3, 390 eggs, weight crated, approx. 300 lbs.....	67 50



Prairie State Diffusion No. 2—
240 Eggs

THE PRAIRIE STATE CATALOGUE, which will be sent free on request, explains fully the principles of construction and tells all about the different sizes of Incubators and Brooders.

Buckeye Incubators Hatch More Chicks

Buckeye Incubators give results that cannot be secured with any other Incubator. They hatch more chicks. They hatch bigger, stronger, better chicks.

The Buckeye Incubator is not a cheap machine built to sell at a low price. It is an Incubator designed and built with one idea in view—to produce the most perfect results possible to obtain. However, it is the lowest priced Incubator one can buy if highest percentage of hatch, the production of the strongest, healthiest chicks, the greatest ease and economy of operation and longest life, are to be considered. Sizes to meet every requirement and prices to suit every purse.

The Buckeye Hot-Water-Heating System insures absolutely correct temperature being maintained every minute of the incubation period. It insures the heat being uniform over the entire egg-tray. There are no underheated eggs—no overheated eggs. The air in the Buckeye egg-chamber is always fresh and pure. It is always moist. It isn't dried out. The Buckeye system retains all the natural moisture in the air.

Patented All-Metal Thermostat

The greatest contribution to artificial incubation is the patented Buckeye All-Metal Thermostat. It prevents that harmful fluctuation in temperature that kills the chicks in the shell. It gives absolute control of the temperature in the egg-chamber regardless of the changes in outside temperature. It insures the maintaining of the necessary temperature in the egg-chamber at all times. This wonderful Thermostat is all-metal. It doesn't go wrong; it doesn't wear out; it is always sure and reliable.

Guaranteed

Buckeye Incubators are guaranteed. Any Incubator or part thereof that does not fulfil our guarantee will be replaced any time within forty days.

ASK FOR A BIG BUCKEYE CATALOGUE

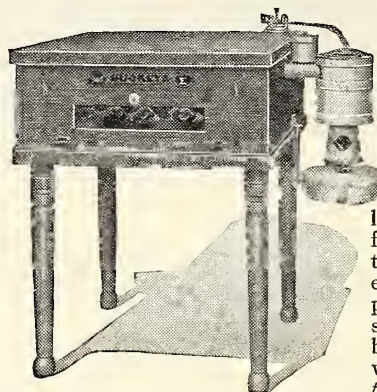
Six "Standard" Models

California redwood is used exclusively in the outside walls. The top and sides are two pieces of seasoned lumber with corrugated insulation between. The patented lamp and lamp support meet the requirements of the Insurance Underwriters' Laboratories. This insures an incubator that is absolutely fireproof. Also equipped for gas instead of oil, if desired.



Model	Capacity	Price
No. 1	110 eggs.....	\$37 50
No. 2	175 eggs.....	44 50
No. 3	250 eggs.....	57 75
No. 4	350 eggs.....	68 00
No. 5	600 eggs.....	107 00
No. 40	1144 eggs.....	250 00

Three Style "E" Models



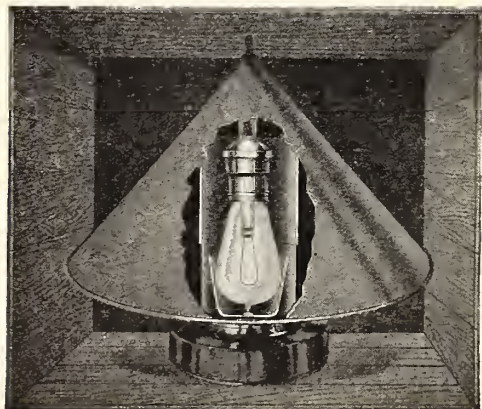
A quality Incubator at exceptionally low prices. The walls are made of California redwood; the top is two pieces of seasoned lumber with corrugated insulation between.

A Standard Buckeye Metal Thermostat regulates the temperature to a fraction of a degree. With this device, it is only necessary to regulate the temperature when the hatch is started—then you forget it, because the regulator stays where you put it and the temperature of the egg-chamber

cannot change. This is a distinct advantage.

The tank is an improved design that absolutely insures a uniform temperature throughout the egg-chamber. This means that the temperature of each and every egg will be exactly right, and if there's a chick in the egg you'll get it.

Model	Capacity	Price
No. 14	65 eggs.....	\$16 50
No. 16	110 eggs.....	27 50
No. 17	210 eggs.....	36 75



Pat's Electrical Chick Brooder

BUILT LIKE A COAL-BURNING STOVE BROODER
Heat Supplied by Electric Light Bulb

A timely and important appliance for the amateur poultry-raiser. A Chick Brooder for small flocks that puts the heat where it is needed—on the chick's back. No wicks to trim, no oil lamps to bother with, no wires to burn out, no complicated electrical fixtures to get out of order. Use a common light bulb.

Place Pat's Electrical Chick Brooder in a box, turn on the current, and watch the chicks grow. Raise them by electricity—dependable and safe.

Price in Heavy Tin Plate.....	\$3 50	Postpaid \$3 75
Price in Galvanized Plate.....	4 00	4 25

DAY-OLD CHICKS. We make a specialty of furnishing our customers with Day-Old Chicks of all leading breeds, from high-bred stock. Beginning early in March, we will receive from nearby hatcheries from one to three shipments per week. To secure the breeds desired and the choicest stock we suggest that orders be placed at least a week or ten days before the chicks are wanted. Prices quoted on request.

Reliable "Standard" Incubator

RELIABLE BECAUSE RIGHT

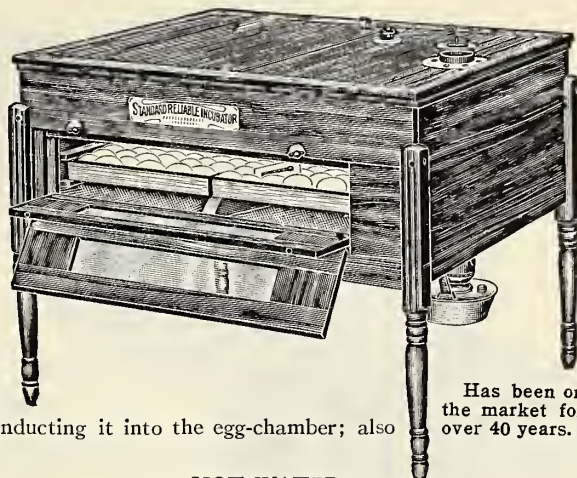
They are made of high-grade, thoroughly seasoned lumber; double walls, space between walls carefully insulated with the best non-conductors of heat; the top above tank is heavily insulated with several thicknesses of insulation, each layer separated by sheets of heavy non-conducting cardboard; two separate doors, made extra thick with extra-heavy glass which permits an easy observation of all parts of the egg-chamber without opening doors of the machine; double heating system, a feature which gives a decided advantage in economy of operation.

Perfect moisture is assured, heated air throughout the machine coming in contact with air from ventilator. Has nursery beneath egg-tray.

The Reliable Standard Incubators are made in both the hot-air system and the hot-water system.

The hot-air system consists of two tubes, one running entirely through the Incubator and the other open at the inner end, supplying fresh air and at the same time radiating heat.

The hot-water system consists of two tanks, a hot-air tank and a copper hot-water tank. The hot-air tank heats the fresh air supply before conducting it into the egg-chamber; also radiates the heat from its own surface.



Has been on the market for over 40 years.

HOT AIR

No. 49a, 100 Eggs.....	\$22 50	No. 57, 450 Eggs.....	\$63 00
No. 51, 140 Eggs.....	31 00	No. 81, 70 Eggs.....	15 50
No. 53, 240 Eggs.....	43 00	No. 83, 125 Eggs.....	23 50
No. 55, 350 Eggs.....	51 00	No. 85, 240 Eggs.....	33 00

HOT WATER

No. 50a, 100 Eggs.....	\$28 00	No. 58, 450 Eggs.....	\$79 00
No. 52, 140 Eggs.....	37 00	No. 82, 70 Eggs.....	17 00
No. 54, 240 Eggs.....	51 50	No. 84, 125 Eggs.....	28 00
No. 56, 350 Eggs.....	63 00	No. 86, 240 Eggs.....	37 00

Write for complete catalogue of Reliable Incubators and Brooders

Lectro-hatch

Electric Incubators and Brooders

"Do it Electrically!" Lectro-hatch Incubators and Brooders have made poultry-raising safe, easy, and certain. Chicks hatched by electricity have the appearance of being a week old the day they're hatched. Even heat and fresh, pure air gives the chick every advantage for life, growth, and development that nature intended.

Electricity is the ideal heat, without the care, fumes, dirt, and danger of fire which you are sure to find in other style machines. Day or night, warm weather or cold, your temperature never varies, but stays steady and even, right where you set it. Think what this means! No lamps to fill, no wicks to trim, no coal to carry, no work or worry of any kind—everything automatic. Costs less than a cent an egg to operate. Lasts a lifetime.

The Lectro-hatch Brooder has the same principle of reliable heat and automatic temperature control as the Lectro-hatch Incubator. Night or day the temperature in your Brooder never varies. There are no ups or downs—no frozen or roasted chicks. Chicks breathe fresh, pure air all the time. Pure air, unchanging heat and no crowding will prevent a big part of your usual chick losses. Lectro-hatch Brooders are strongly built of heavy galvanized metal, with heavy felt curtain—sturdy, attractive, efficient, and durable.

When ordering Lectro-hatch Incubators or Brooders, state voltage of your electric current.

MADE IN TWO POPULAR SIZES

150-Chick and 500-Chick



It's all Brooder—No lamp, no stove.

Lectro-hatch

ELECTRIC INCUBATORS

65-egg size.....	\$23 50
150-egg size.....	38 00
300-egg size.....	67 00
600-egg size.....	118 00

Lectro-hatch

ELECTRIC BROODERS

150-chick size (28-inch diameter).....	\$18 00
500-chick size (40-inch diameter).....	23 50

ASK FOR SPECIAL CIRCULAR

Newtown Lamp Incubators

If you are looking for an efficient small Incubator, you cannot go wrong in buying a Newtown Lamp Incubator. These machines are made of beautifully finished chestnut and with ordinary care will last indefinitely. The heating system is of copper, and with the exception of the smallest size, it is equipped with a mechanical egg-turner, one simple movement of which will turn the eggs of each tray. There is nothing complicated about them—a child can operate them. They carry a steady temperature and burn little oil, are ideal hatchers and produce strong, husky chicks.

PRICES

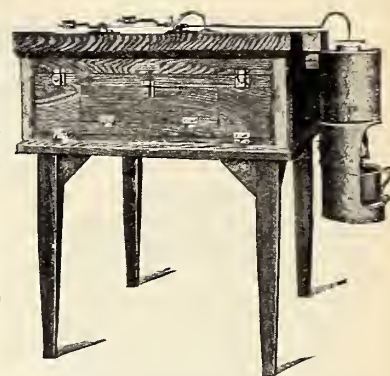
No. 2. 65-egg.....	\$26 25
No. 3. 150-egg.....	40 50
No. 4. 300-egg.....	60 00

Baby Grand Incubator

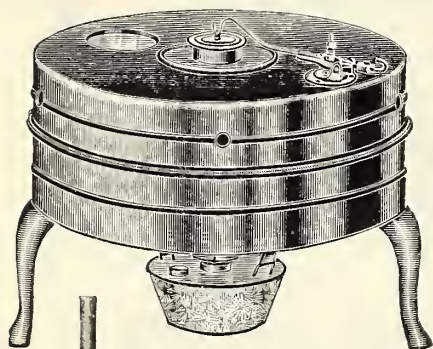
50-Egg Capacity—All Metal

Unique and superior in its construction; beautiful in its appearance; excellent in its hatching qualities; and the most reliable and easiest operated small Incubator ever offered to the trade. It has a glass window in top so thermometer and chicks can be seen without opening machine. It has a positive heat and moisture regulation, and is equipped with a moisture receptacle for applying additional moisture when needed. Has double top, well insulated and packed; double side walls, with a free circulation of hot air between the walls all the time, making an equal distribution of heat through the machine. The ventilation is perfect, supplying warm, fresh air to all parts of egg-chamber at all times.

Price \$6.50; postpaid, \$6.80



Newtown 150-Egg Lamp Incubator



"Buckeye" Lamp-Heated Brooders

Nothing about it but metal—excepting the curtain—and that's interchangeable

There is No Waste of Heat. The dead air-space keeps all the heat in and all the cold out. This construction insures the highest degree of efficiency, and we guarantee the satisfactory heating of every Brooder in any inside temperature down to freezing.

The "Buckeye" Lamp is Not Enclosed. This feature of the "Buckeye" Brooder is in itself one of the most valuable improvements ever made to an oil-burning Brooder. It is, in fact, the improvement that makes the oil-burner just as safe as a coal-burning stove.

Fresh Air. The constant current of fresh air over the lamp-bowl prevents all possibility of overheating the oil, and absolute safety is the result. This improvement is just as good as an insurance policy. It's the fresh air that makes the chicks grow.

The Brooder Body is supported by three Cast-Iron Legs that are rigidly secured to the sides by a set-nut, which makes them easily detachable.

The Lamp Support is free from the floor and is welded to the plate above. The door to the lamp-chamber is of galvanized steel with a large peep-hole for the ready observation of the lamp.

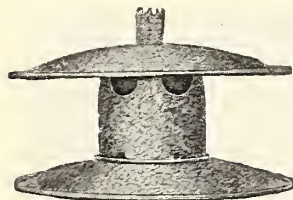
The Lamp-Bowl is made of seamless galvanized steel—the burner is a "Miller"—all the fittings are of heavy brass and the chimney is made of sturdy black iron.

The Thermometer is mounted on a hardwood turning which is dropped through the top of the brooder, and brings the bulb of the instrument right down to the level of the chicks. Each Brooder is equipped with a thermometer.

PRICES—Made in Two Sizes

No. 20. Diameter 19 inches, 60 chicks.....	\$11 75
No. 21. Diameter 22 inches, 100 chicks.....	15 50

ASK FOR A BIG BUCKEYE CATALOGUE



Putnam Brooder Heater

"Burns 10 days without attention"

The Putnam Brooder Heater is the heating plant for the Putnam Home-made Brooder. Directions for making this brooder at trifling cost are packed with every Heater.

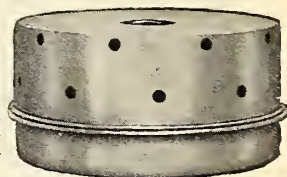
Anyone can build one in an hour or so with no tools but saw and hammer. It would care for 35 to 60 chicks. The Heater is made entirely of brass and galvanized iron and is practically indestructible. It holds one quart of oil and burns from eight to ten days without refilling or any other attention. The Heater cannot be blown out by a hurricane. It is fire-safe and fool-proof. Tens of thousands of Putnam Brooders have been built and used with success.

Price \$4.75, postpaid

Little Putnam Stove

"Burns a month without attention"

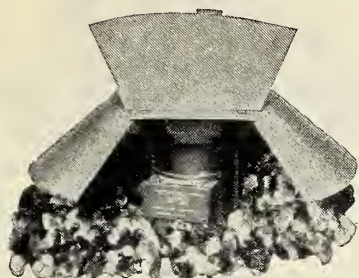
The Little Putnam Stove is used under the drinking vessel in the poultry-house to keep the water from freezing during the winter months. It is also used as the heat element in the Putnam Home-Made Oat Sprouter. It is 8 inches in diameter and 4 inches high and is made of galvanized iron and equipped with a burner which embodies an entirely new principle in oil combustion. The oil tank holds three pints of oil and burns three to four weeks without refilling or any other attention. The wick never needs trimming. Full directions for making a home-made Oat Sprouter at trifling cost furnished free with every Little Putnam Stove.



Price \$1.95, postpaid

Newtown Colony Brooders

WILL INCREASE YOUR POULTRY PROFITS



Coal-Burning Brooders Give Wonderful Results

The Newtown Coal-Burning Brooder is a sensation. It has given poultry-raisers a new idea of chick-raising efficiency. It has produced results that are almost unbelievable. This is because of Newtown's advanced design. It is the result of 25 years of brooder building. In all parts of the country it is producing phenomenal results.

BIG EXCLUSIVE FEATURES

Newtown is noted for its wonderful exclusive features. It has an extra-big, self-feeding coal-magazine, an extra-big fire-bowl, a large combustion chamber and double-check draft—thermostatically controlled.

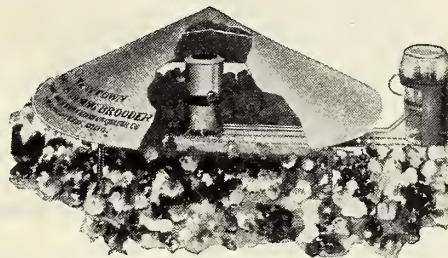
When you think of these features you can see how Newtown is built to brood chicks under every emergency. It gives a marvelous amount of heat. It cares for all your chicks regardless of weather conditions. It burns soft coal satisfactorily, as well as hard coal. And Newtown holds the fire. It doesn't require constant attention. You don't have to get up at night to see if your chicks have enough heat. They're always safe and warm with Newtown.

LESS WORK AND ATTENTION

Newtown is economical to operate. It saves time and work. It is easy to coal. The heat regulator is self-regulating. The deflector is conveniently hinged to permit easy access to the stove.

THREE SIZES

Model	Chick Capacity	Diam. Hover	Price
No. 7.	Up to 300	48 in.....	\$25 00
No. 11.	Up to 500	50 in.....	32 50
No. 12.	Up to 1,000	56 in.....	40 00



Marvelous Oil-Burning Brooder

The Newtown Oil-Burning Brooder is a triumph of Oil-burning Brooder design. Thousands and thousands of poultry-raisers have been amazed at the exceptional results obtained with their Newtowns.

Newtown has a wick burner. That's one big feature. It's simple, easy and safe to operate. There's no flaring up; no going down. There's no "oil-leveling" mechanism to go wrong. When you light the burner, it stays lighted. When you turn the wick up or down it stays regulated.

VENTILATED METAL BASE

Another big feature is the ventilated metal base. It insures a full supply of oxygen to the burner at all times—the fresh, cool air is supplied to the burner from outside the deflector. The huddling of the chicks around the brooder doesn't retard combustion. This means every drop of oil produces the greatest possible amount of heat. It means the burner is operating at full efficiency all the time.

And there are still more special features. The Newtown deflector has the patented heat Conveyor—a device so attached to the deflector as to insure the most efficient radiation of the heat. All the heat is used. Every chick has just the amount of warmth that suits it best.

These are the reasons for Newtown's popularity. If you want an oil-burning brooder you need look no further.

THREE SIZES

Model	Chick Capacity	Diam. Hover	Price
No. 500.	Up to 200	34 in.....	\$17 50
No. 501.	Up to 350	42 in.....	19 00
No. 502.	Up to 500	52 in.....	21 50

GUARANTEE

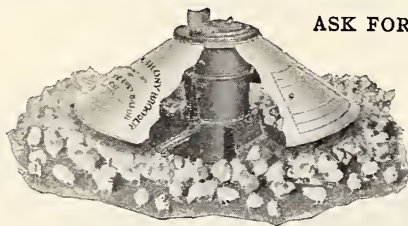
Newtown Brooders are guaranteed to give satisfaction. Try any size for 30 days. If you are not satisfied your money will be refunded

ASK FOR SPECIAL CATALOGUE OF NEWTOWN BROODERS

Hard Coal for Brooder Stoves. We can furnish Chestnut size Hard Coal, suitable for Brooder Stoves, put up in 100-lb. bags at \$1.50 per bag, f.o.b. Pittsburgh. Prices subject to market change

Buckeye Brooders Raise More Chicks

ASK FOR THE BIG BUCKEYE CATALOGUE



Improved Coal-Burning Brooder

The Improved Coal-burning Brooders give the greatest values ever offered. The prices are drastically reduced. The Brooders are improved. The stoves are larger. They hold more coal. They give more heat. They burn soft coal or hard coal longer with one fueling. The double Check Draft—thermostatically controlled—insures the holding of a continuous fire. The revolving hover saves time and work. Every attention can be given the Brooder without raising the hover or disturbing the chicks.

Baby chicks not only need enough heat, but they also need constant, correct heat. If the stove gives too much heat part of the time and not enough heat part of the time, some of the chicks get overheated or chilled.

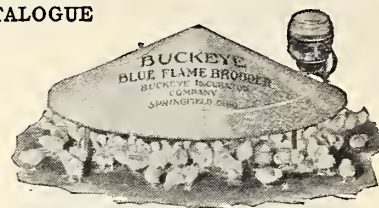
The invention of the Thermostat Heat Regulator literally takes the gamble out of the raising of chicks. It eliminates all chance. It replaces gambling with certainty. This wonderful device so operates the Double Check Draft as to insure the holding of a continuous fire. It prevents the fire from going out. It prevents the fire from underheating and from overheating. There's no chance of the chicks getting cold and crowding. Chilling, crowding, overheating, and smothering are prevented.

Another exclusive feature is the famous Non-Clogging Rocker Grate. It's bigger. It makes possible the bigger fire body. It prevents clogging and insures the positive feeding of the coal. It prevents clinkers from interfering with the normal operation of the heater. That's one reason Buckeye holds the fire. Another reason, the fire doesn't go out or go down.

Buckeye uses only a small amount of coal. It's surprising how little coal is needed in ordinary weather. It's amazing the amount of heat produced from every pound of coal. And all the heat is used. This is because of the exclusive design of the Buckeye Stove. It has a higher radiating power. It scientifically radiates the heat to the chicks and the floor of the brooder house.

Three Models

Model	Actual Chick Capacity	Diameter of Hover	Price
No. 117	Up to 350	42 in.	\$16 50
No. 118	Up to 500	52 in.	21 50
No. 119	Up to 1,000	56 in.	26 50



Most Effective Oil-Burning Brooder

Buckeye is the most efficient Oil-burning Brooder ever devised. It has a wick burner. There is no "oil-leveling" mechanism to go wrong. There are no valves or levers to fuss with and adjust. There's no priming necessary. It is as safe, reliable, and simple to operate as a high-grade kitchen oil-stove. Simply light the burner and the job is done.

Buckeye has the patented "Diafram" Heat Conveyor—a device attached to the hover that insures radiation of the heat to all the chicks. It means all the heat is used and all the chicks are cared for better.

The greatest cause of the high mortality of baby chicks with old type brooders is insufficient heat. Without enough heat the chicks crowd—part of them get smothered to death—those on the outside get chilled; those on the inside get overheated.

The Buckeye Burner has proven itself to be the most efficient oil burner ever devised. The burner is big. It has a big wick. It has the capacity to furnish enough heat all the time when operated in accordance with our instructions. It has the capacity to keep all the chicks warm, comfortable and thriving.

With a large, steady and reliable supply of heat from the Buckeye Burner; with the heat efficiently radiated to the chicks by the Buckeye Hover, Buckeye's chick-raising ability is amazing. You can always depend upon it to raise your chicks. But, of course, you can't expect an oil-burning brooder to heat a brooder house or a large, poorly constructed room. To make such a claim is ridiculous. No oil-burning brooder made can possibly supply the heat to the brooder house that is done by the Buckeye Coal-Burning Brooder. But if you operate this wonderful Buckeye Blue-Flame Brooder in small, warmly constructed or heated brooder houses, or in climates where the temperature rarely falls below freezing, you'll get chick-raising results such as you have never seen before. Buckeye has more than enough heating ability when operated under reasonable conditions.

Three Models

Model	Actual Chick Capacity	Diameter of Hover	Price
No. 27-A	Up to 200	34 in.	\$17 50
No. 28-A	Up to 350	42 in.	20 00
No. 29-A	Up to 500	52 in.	22 50

GUARANTEE. Buckeye Brooders are guaranteed to do all we claim. Try any size for 30 days and if not satisfactory your money will be refunded.

Hard Coal.

We furnish Chestnut-size Hard Coal, suitable for Incubator and Brooder Stoves, put up in 100-lb. bags at \$1.50 per bag, f. o. b. Pittsburgh. Prices subject to market changes.

The Reliable Coal-Burning Colony Brooder

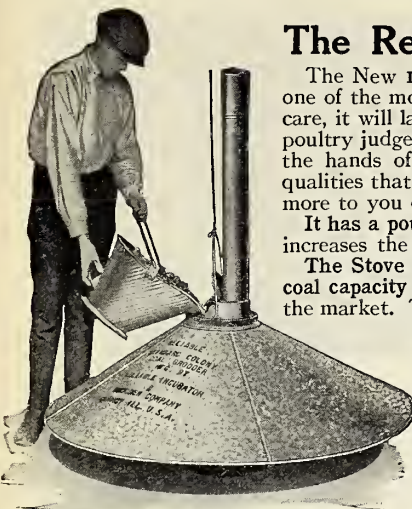
The New 1923 Reliable Coal-Burning Brooder is, without question, one of the most durably constructed Brooders made and with ordinary care, it will last a lifetime. It appeals to the best judgment of the best poultry judges of the world. Moreover, it does its work to perfection in the hands of the most inexperienced operator. It has features and qualities that are not possessed by any similar Brooder and it is worth more to you on account of these improvements.

It has a **pouch feed door** in the new designed top of the stove, which increases the coal capacity.

The Stove weighs fully 15 per cent more and has 10 per cent larger coal capacity than any similar stove of the same brooding capacity on the market. This does not seem of much importance but when you stop to think that this 10 per cent more coal will run this stove from two to four hours longer, it is an item worth considering.

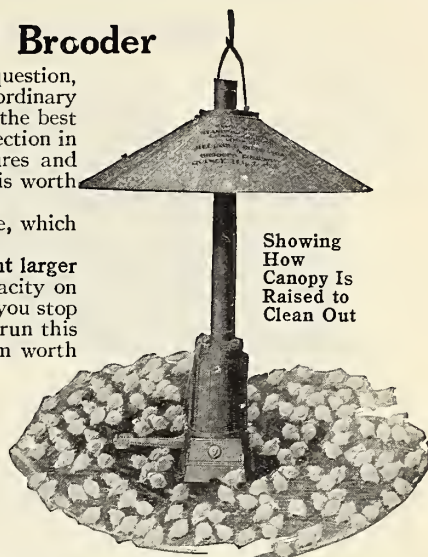
Burns soft coal. Hard coal is best to use if it can be obtained but this is not always possible, so to make this Brooder adaptable to the use of soft coal, we have equipped it with a 4-inch flue and a screw plate draft, making it possible to burn soft coal without it clogging up or going out.

We have spared no means to make it the best coal Brooder it is possible to manufacture.



Showing how stove is filled

The cost of operating is as low as any, running from 10 to 25 cents per day, according to fuel used. These Brooders can be operated in any kind of a building or room, in any kind of weather.



Showing How Canopy Is Raised to Clean Out

	Height	Diam. of Cylinder	Diam. of Grate	PRICES	
				Canopy	Capacity
No. 9	22 inches	10 inches	9 inches	42 inches	500 or less.....
No. 10	26 inches	13 inches	11 inches	52 inches	1,000 or less.....
No. 11	26 inches	13 inches	11 inches	60 inches	1,200 or less.....
					Price
					\$16 50
					21 50
					26 50

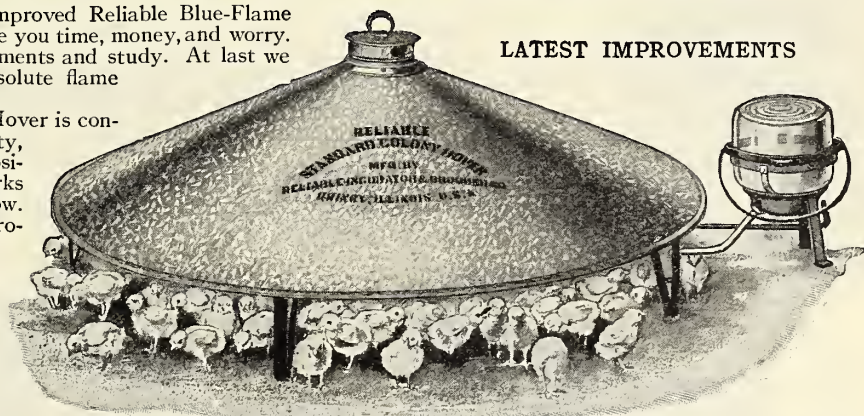
Reliable Blue-Flame, Wickless, Oil-Heated Colony Hover

Our 1923 Model Positive Oil Level Improved Reliable Blue-Flame Wickless Oil-Heated Colony Hover will save you time, money, and worry. It is the result of years of practical experiments and study. At last we have perfected a heater that has an absolute flame control, and is easy to regulate.

The Heater being the vital part of the Hover is constructed with great care as to its durability, simplicity, and ease of operation. It is positively "fool-proof." It is valveless and works on an oil level. Cannot clog up or overflow. Has a cast iron base under burner which protects the floor from the heat, making it absolutely safe. We use a large oil-feed-pipe with a cap on burner end that is removed for cleaning.

The big advantage in this heater is that there are no packing or stuffing box arrangements to get loose and leak oil. We have a flexible tube with a positive connection at each end connecting the burner to feed-pipe, making it leak-proof. The lifting device for controlling burner is simple and positive, no lost motion or sticking—free easy movement. Will hold burner where set without danger of slipping or being moved by the chicks. Burner is made of brass; is rust and leak-proof. They are lower at front than rear, so when burner is turned out, the oil drains out of burner rapidly and the flame responds quickly. The

LATEST IMPROVEMENTS



indicator dial with positions plainly marked for Low, Medium or High Flame, makes the adjustment of the flame both easy and accurate.

This Heater will not flare up or go out during the night hours and scare or chill your chicks. It burns automatically without care or bother, except only to keep it supplied with oil.

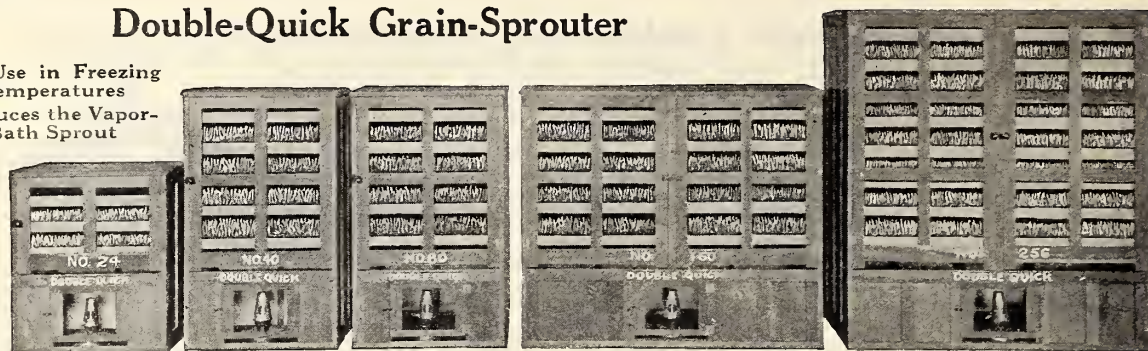
	Size	Capacity Chicks	PRICES		
			Price Heater Only	Price Canopy Only	Price Complete
No. 0	30 inches	350	\$12 50	\$5 50	\$16 00
No. 1	42 inches	500	12 50	6 50	16 50
No. 2	52 inches	1,000	12 50	8 00	19 00

Convert Your Coal Brooder or Old-Style Oil Hover into the Latest Improved Oil Burning Hover

By purchasing our Blue-Flame Oil-Heater only, which is used instead of the stove in the coal brooder. Order heater only of same size as your canopy and state diameter of opening in top of canopy.

Double-Quick Grain-Sprouter

For Use in Freezing
Temperatures
Produces the Vapor-
Bath Sprout



No. 24
24 qts. or $\frac{3}{4}$ bus.
for 75-100 hens
\$18

No. 40
40 qts. or $1\frac{1}{4}$ bus.
for 125-175 hens
\$24

No. 80
80 qts. or $2\frac{1}{2}$ bus.
for 250-325 hens
\$36

No. 160
160 qts. or 5 bus.
for 500-600 hens
\$49

No. 256
256 qts. or 8 bus.
for 800-1,000 hens
\$72

Outside cypress wall insulated with rosin board and asbestos to retain heat. Inside galvanized steel grain-chamber. Lamp-heat passes up between the metal and the wood walls. Utilizes all the heat. Takes but little oil in lowest temperatures. The water-pan above the lamp creates the vapor that bathes the grain in warm moisture, thus producing the highly edible vapor-bath sprouts. Fitted with drain-tube for water overflow, a ventilation system to keep down mold, glass doors to stimulate growth and produce chlorophyll in the sprouts, removable top, etc. The entire machine is made of first-class material, is finished in the natural colors of the cypress, makes a nice piece of furniture, and is without doubt the most economical and efficient Sprouter now manufactured. Nos. 160 and 256 have double sets of trays so that no tray when full of green oats is so heavy but that it can be handled by a woman. All sizes pass endways through ordinary doors.

Feed Sprouted Oats for Eggs

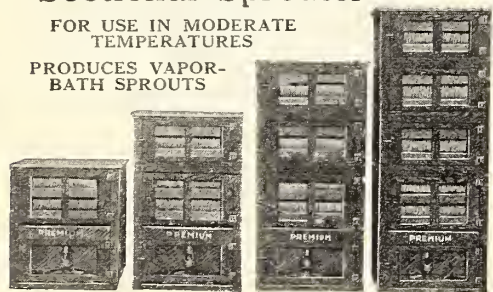
To get eggs in winter, feed sprouted oats. For prolific egg-production any season, there is no feed better or cheaper than the sprouted grains. When properly sprouted they afford not only the green forage the hens so much need, but they contain the valuable diastase, also the grape sugar, the "vegetable milk," and other easily digested and highly nutritious elements so essential in egg-production. It matters not on what ration the hens are fed, an increased egg-yield always results when sprouted oats are added.

WHEN AND HOW MUCH TO FEED

Best results are had when sprouts are 2 to 4 inches long. If hens are simply to be kept in good condition during winter for heavy spring laying, feed very sparingly. But for eggs, feed the hens every day all the sprouts they will eat. See that your Sprouter has a capacity of 1 bushel, or 32 quarts, for every 100 hens. By running a 1-bushel size at full capacity, putting in a few quarts each day of fresh oats as the sprouts are fed, a flock of 100 hens may be fed sufficient sprouts to produce eggs.

Small Premium Metal Sectional Sprouter

FOR USE IN MODERATE
TEMPERATURES
PRODUCES VAPOR-
BATH SPROUTS



SP
16 qts. or
 $\frac{1}{2}$ bus.
50-70 hens
\$10

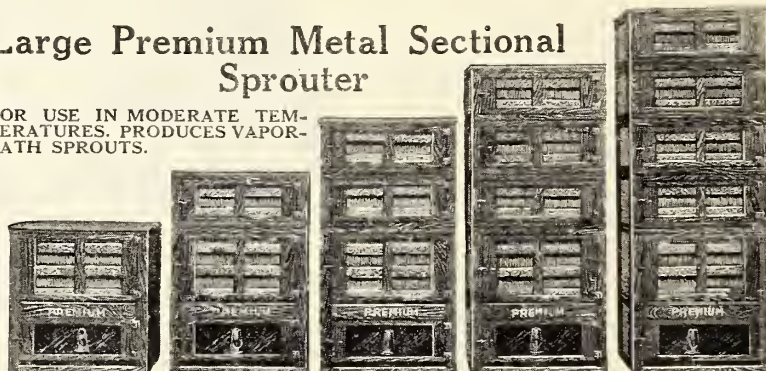
SP1S
32 qts. or
1 bus.
100-140 hens
\$15

SP2S
48 qts. or
 $1\frac{1}{2}$ bus.
150-200 hens
\$19.50

SP3S
64 qts. or
2 bus.
200-275 hens
\$23.50

Large Premium Metal Sectional Sprouter

FOR USE IN MODERATE TEM-
PERATURES. PRODUCES VAPOR-
BATH SPROUTS.



LP
48 qts. or
 $1\frac{1}{2}$ bus.
150-200 hens
\$18

LP1S
80 qts. or
 $2\frac{1}{2}$ bus.
250-325 hens
\$25

LP2S
112 qts. or
 $3\frac{1}{2}$ bus.
350-425 hens
\$31.50

LP3S
144 qts. or
 $4\frac{1}{2}$ bus.
450-550 hens
\$37.50

LP4S
176 qts. or
 $5\frac{1}{2}$ bus.
550-675 hens
\$43

Prices of additional Sections: Large Section, \$7; Small Section, \$5

The Premium is constructed of galvanized sheet steel strengthened by an outside cypress framework. The metal will last for many years while the cypress is the "wood eternal." The Premium incorporates all the essentials of a vapor-bath Sprouter, such as a heater, vapor-pan, glass doors, ventilation, removable top, overflow tube, etc., and produces the vapor-bath sprouts. To be used in basement, cave, kitchen, or where the temperature does not run much below freezing.

The Premium is built on the sectional plan—buy what you now need and afterward add sections. Sections fit with telescope joint and stay on. Two base sizes are provided, the Small Base holding $\frac{1}{2}$ bushel and each of its sections $\frac{1}{2}$ bushel; the Large Base holding $1\frac{1}{2}$ bushels and each of its sections 1 bushel.

Ask for special circular giving valuable information in regard to feeding sprouted grains

"Successful" Grain-Sprouter

The feeding of sprouted oats is highly endorsed by the poultry experts of the agricultural experiment stations, because grain fed in a sprouted condition is easily digested, goes three times as far, and is therefore much cheaper and better than when fed in a dry condition.

You can make your hens lay 40 to 50 per cent more eggs. You can reduce the cost of feeding 25 to 30 per cent by giving them SPROUTED OATS easily and quickly produced in the

"Successful" Grain-Sprouter

Made in Sections—Double Steel Walls—Fireproof—Safe to Use Anywhere in the House.

The most profitable appliance for poultry-raising since the invention of the incubator.

Manufactures for you in a week's time the best green egg-making feed at 15 to 18 cts. per bushel.

Takes but 15 minutes a day to attend to.

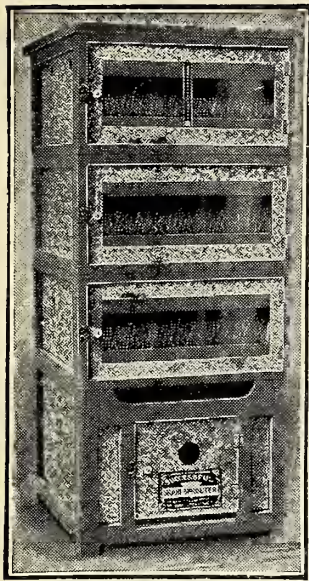
Costs but one-half cent per day for kerosene.

This succulent, nutritious, green feed will turn your hens from idle feed consumers into industrious egg-producers at a time when it takes but one dozen of eggs to bring as much money as two or three dozen in spring or summer.

All our Sprouters have a hinged top, permitting the operator to sprinkle the grain from above in one operation. The water percolates through all the trays. This is a great labor-saving device and practically eliminates any kind of a muss-up.

PRICES AND CAPACITIES

No. 1. Base and 1 section;	2 trays; holds 8 to 10 quarts dry grain.	(For 30 to 60 hens).....	\$12 00
No. 2. Base and 2 sections;	4 trays; holds 16 to 20 quarts dry grain.	(For 75 to 100 hens).....	15 00
No. 3. Base and 3 sections;	6 trays; holds 24 to 30 quarts dry grain.	(For 130 to 200 hens).....	18 00
No. 4. Base and 4 sections;	8 trays; holds 32 to 40 quarts dry grain.	(For 250 to 350 hens).....	21 00
No. 5. Base and 5 sections;	10 trays; holds 40 to 50 quarts dry grain.	(For 400 to 600 hens).....	24 00
Each additional section and two galvanized all-steel trays.....			4 50



Moe's Lampless Oat Sprouter

Made entirely of metal. Strong and rigid.

Provides the very necessary green feed at all seasons. Healthy chickens and more eggs.

The frame is of steel, well braced and neatly painted. Has six heavy galvanized iron pans. Five of the pans have perforated bottoms to secure the proper drainage, and the bottom pan is solid to hold the drippings. Pans are interchangeable. Sectional frame can be quickly taken apart and stored in a small place.

Total height of frame 3 feet. Size of pans 16 by 18 inches.

Price, No. 110, \$6, postpaid \$6.35.



Banner Root Cutters for Poultry

Indispensable to the Hen Man, Duck Man and Broiler Man. Solves the problem of an article always in demand at good prices: "WINTER EGGS."

Reduces cost of feeding, increases production, and is always a medium, right at hand, to give the poultry, in proper shape for consumption, the most economical winter food known—ROOTS AND VEGETABLES.

No. 7. Exclusively for Poultry

It cuts fast and is easy running. Leaves the feed in fine, brittle, ribbon-like strips that make choking impossible. Fowls large or small can safely eat the feed. The knives are adjustable and made of the very best of steel. An iron grate in bottom of hopper lets dirt and gravel escape before reaching the knives. Two to five minutes will cut enough feed for a large flock of birds.

Price \$6.50

No. 28. For Poultry or Cattle

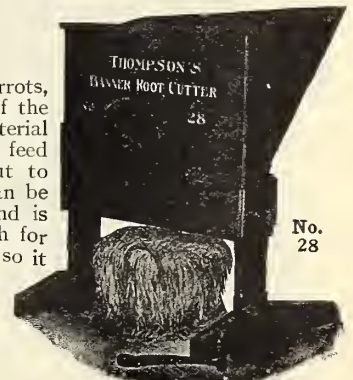
Large Capacity. Hand or Power Use

The No. 28 cuts all roots and vegetables, like beets, carrots, potatoes, onions, apples, turnips, cabbage, or anything else of the same nature, into ribbons, literally shredding the material into feed cut so fine that all stock and poultry can feed without danger of choking. Built strong and stout to stand power use, and furnished with a crank so it can be used by hand also. Cutter has a large capacity and is supplied with eight steel knives. It cuts fine enough for sheep, lambs, and fowls and still has ample capacity so it can be used to cut for cattle also. Running the knives one way it shreds the roots and by reversing the knives it will cut in flat slices. Weight of machine, complete, 180 pounds. Capacity of hopper, about 2½ bushels.

Price \$26.50



No. 7



No. 28

Mann's Bone-Cutters

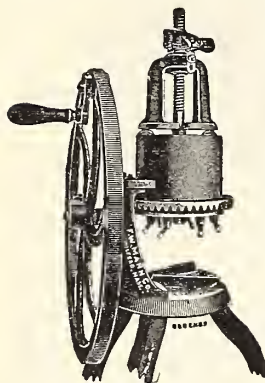
THE LAYING HEN IS THE PAYING HEN

The poultry-raiser wants eggs, and wants them when eggs are worth the most. Green bone and raw meat produce them. There is no doubt about that. Experience proves it; science shows why.

The hen will do her part if you give her a chance. The Mann's Bone-Cutter gives *you* a chance to give *her* a chance. It gives you a better chance than does any other bone-cutter.

Mann's Green Bone-Cutters have been sold for the past twenty-five years, and there are more of them in use today than of all other makes combined. We have sold them for many years and have yet to find a dissatisfied customer.

Every machine is guaranteed, and must do the work. If you want to know more about them before purchasing, ask for complete catalogue.



No. 5 B. M.

No. 5 C

The same as the No. 5 B, with a crank handle instead of a balance wheel. Capacity not quite equal to 5 B. Weight, 35 pounds. Price \$12.

No. 5 B

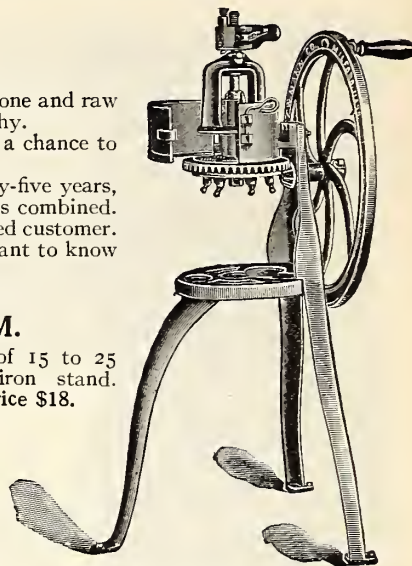
Exactly the same as the No. 5 B. M. except that it has no iron stand. The capacity is the same. Weight 60 pounds. Price \$15.

No. 5 B. M.

Intended for flocks of 15 to 25 hens. Mounted on iron stand. Weight, 85 pounds. Price \$18.

No. 7½ Semi-Power

A combination hand or power Bone-Cutter. Capacity 50 to 100 pounds per hour. Price \$28.



No. 7. Weight 107 pounds

No. 7 New Model

Intended for flocks of 40 to 100 hens. Can be profitably used for 200 hens or more. Mounted on strong iron stand with large table for box or pan to receive cut bone. Weight 107 pounds. Capacity one-half to one pound per minute. Price \$19.75.

No. 9 New Model

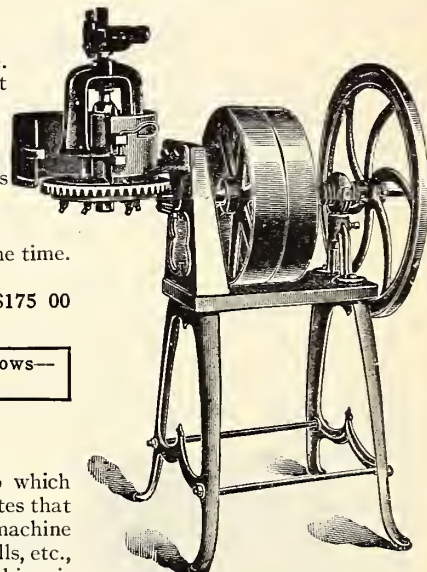
Intended for flocks of 100 to 300 hens. Weight 170 pounds. Capacity ¾ to 1¼ pounds per minute. Price \$30.

No. 11 Model

Intended for large flocks when the machine must be run by hand a portion of the time. Weight 215 pounds. Capacity 100 pounds and upwards per hour. Price \$45.

No. 12 Power Machine\$65 00 No. 18 Power Machine\$175 00
No. 15 Power Machine125 00

The Mann's has won more than 300 first premiums at expositions, fairs, and poultry shows—more than all other types put together



No. 11. Weight 215 pounds

Stover Hand Grinding Mill

In this Mill are embodied all the good features of other hand grinding Mills to which have been added universal burs or grinding plates that are adjustable for grinding coarse or fine. This machine grinds oats, barley, rye, corn, peas, dry bone, shells, etc., for feeding to poultry. It is a well-designed machine, is strong and well made throughout and of excellent finish, has a 16-inch fly wheel and is light running.



No. 32. Stover Hand Mill

No. 32. Hand Power, capacity 1 to 2 bushels per hour, \$5; postpaid \$5.50.

No. 35-B. Hand Power, capacity 2 to 6 bushels per hour, \$8.50.

Extra Grinders for No. 32, 75c., ppd. 80 cts.; No. 35-B, \$1, ppd. \$1.05. .

Black Hawk Grist Mill

Price complete, \$3.50, Postpaid, \$3.90

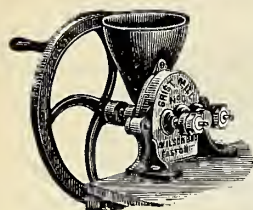


With a Black Hawk Mill you can crack corn or grind any kind of grain to whatever degree of fineness will best suit the age or condition of your fowls.

Grinds corn into meal, wheat into graham flour, rice or buckwheat into flour; in fact, an all-round household Mill that will grind fine or coarse.

Extra Grinders, per set, 60 cts. ppd.

No. 0 Wilson's Family Grist Mill



To Bolt to Bench or Table

Diameter of hand wheel, 20 inches. Capacity, 1 pound in two minutes.

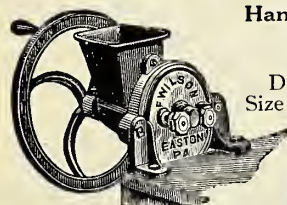
Especially made for grinding graham flour, rice, corn-meal, coffee, spices, etc., for table use. Can also be adjusted in a second for cracking the grain if desired.

The grinding surfaces are very hard and ground off perfectly true on emery wheels. The shaft is steel.

With this Mill in your kitchen you can have fresh graham flour every morning for gems, and corn-meal for mush, etc., and you know how much more delicious they both are when freshly ground. You can also have for breakfast, the freshly cracked wheat which is so hard to buy in stores.

Grinding Plates, when worn out, can be replaced at 90 cents per set. Weight 29 lbs. Price \$7.50.

No. 1 Wilson's Poulterer's Mill



Hand Power. For Grinding Dry Bone, Shell, and Corn for Poultry To Bolt to Bench or Table

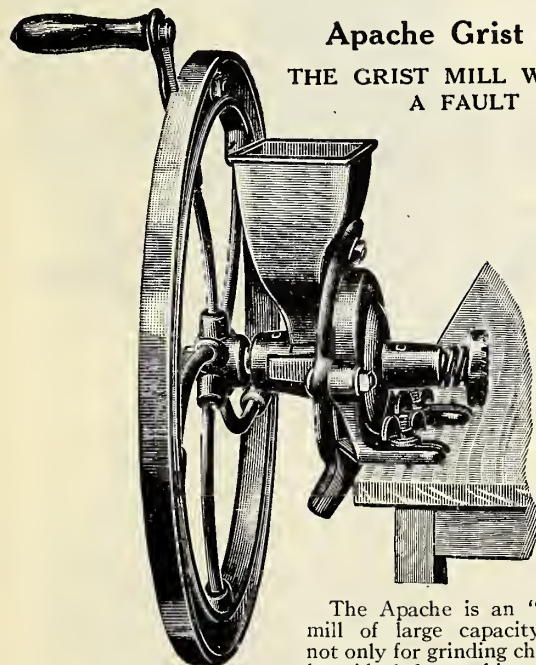
Diameter of hand wheel, 20 inches. Size of hopper, $2\frac{1}{2} \times 3\frac{3}{4} \times 4$ inches.

This Mill will grind, or granulate, dry bones, oyster and clam shells, grit, gravel stones, old crockery, glass, charcoal, corn, walnuts, and all sorts of grain. Also splendid in

the house for grinding stale bread, crackers, roots, barks, etc. The grinding surfaces are made of the hardest material, and will last for years. Weight, 33 pounds. Price \$7.50.

Apache Grist Mill

THE GRIST MILL WITHOUT A FAULT



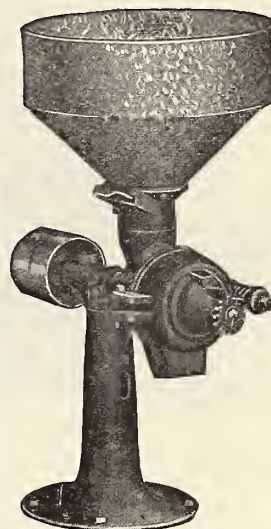
The Apache is an "all-round" mill of large capacity, suitable not only for grinding chicken-feed, but ideal for making corn-meal,

graham flour, rye flour, hominy, etc., for table use. It will grind a quart of meal in three minutes. Has perfect adjustment for fine or coarse work.

Some of the special features of this Mill are a large fly-wheel, scientifically balanced, large hopper, ball bearings, adjustable regulator. These features make the Apache the lightest running, fastest grinding, and most easily operated Mill on the market. Well built and will last a lifetime. Price \$7.50.

Jumbo Power Feed Mill

Here's a Feed Mill that Grinds Ten to Twenty Bushels of Grain an Hour. Grinds the Grain Fine and Grinds it Fast



You can grind oats, rye, barley, shelled corn, wheat, millet, seed, salt, and bark with little power and at practically no cost. Oat hulls can be cut fine. Corn may be cracked or ground fine just as you desire. Simple screw adjustment enables you to grind grain just as fine or as coarse as your needs demand.

Simple as this Feed Mill is, it has a grinding capacity equaled by few. Built of steel and iron throughout, with long and well babitted bearings. Safety springs protect burrs from nails, nuts, etc., and keep burrs apart when machine is running empty.

One set of fine burrs, also one set of coarse burrs furnished with each machine. Pulley 2 by $3\frac{1}{2}$ inches gives proper speed for operation with any engine or light plant. Speed 290 to 1,150 R. P. M. Shaft $1\frac{1}{8}$ inches cold rolled. Large roomy hopper. Firm, broad base. Burrs 6 inches. Weight 90 pounds. Height 33 inches. Power required $1\frac{1}{2}$ Horse Power. Price \$12.

Black Hawk Corn-Sheller

Price \$3.25; postpaid \$3.65



The Black Hawk Corn-Sheller has enclosed hopper and separator. This prevents scattering of the shelled corn. A wonderfully fast and easy running Sheller. Instantly fastened to barrel or box by two large strong clamps with wing nuts.

OUR POULTRY FEEDS

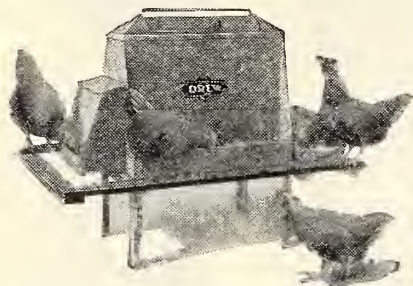
Our line of poultry feeds includes everything necessary to the successful rearing of poultry—feed for the little chick, the growing fowl and the laying hen.

We aim to handle only "the best" and to give our customers "value received for every dollar expended."



Poultry Equipment

Drew Line Poultry Equipment is built for the discriminating buyer, who buys equipment not because of the price but because of the service it will render in increasing egg-yields, in keeping hens healthy and contented, and in making it easier to care for them.



The Drew Mammoth Mash Feeder

Here is the greatest Mash Feeder on the market today—a real egg-maker and a big mash-saver. It has a large egg-mash capacity and is equipped with a special hopper for grit, shell, and charcoal. It can be furnished with or without waterer to make a complete feeding unit.

The 50-pound size is equipped with a mash-hopper 24 inches long and 22 inches deep. The extra-deep feed-troughs on both sides of the hopper enable a large number of hens to feed at one time without wasting valuable feed. This size is designed to accommodate seventy-five hens.

The 100-pound size is similar in design and construction but is just twice as large in egg-mash capacity. Both sizes are made of the best galvanized steel and are of particularly sturdy construction.

DB-850 Mash Feeder, without Grit Hopper, and Waterer. Weight 40 lbs. Capacity 50 pounds egg-mash. \$7.85.

DB-800 Mash Feeder, without Grit Hopper, and Waterer. Weight 60 lbs. Capacity 100 pounds egg-mash. \$11.90.

Drew 8-Gallon Lamp-Heated Waterer

CLEAN, FRESH WATER FOR BIG EGG PRODUCTION

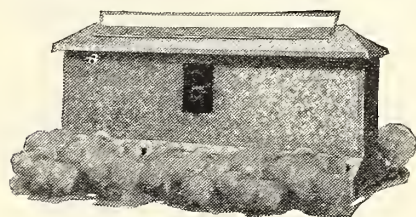
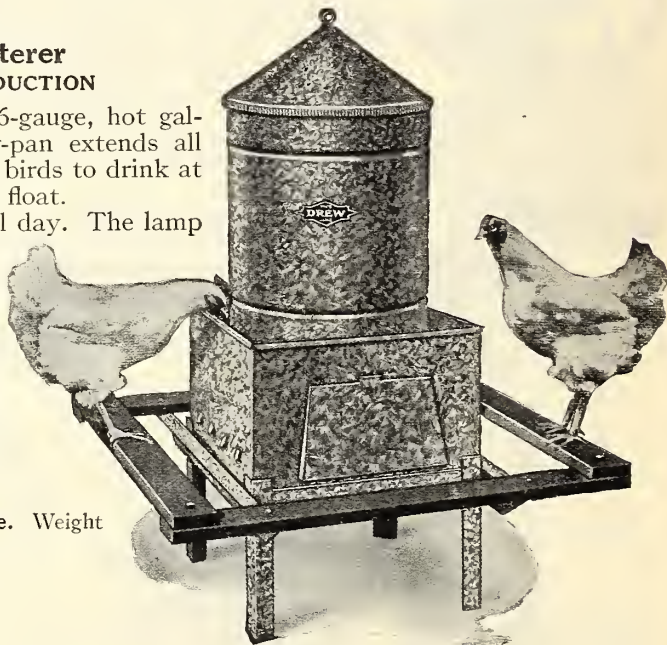
A great Waterer, 8-gallon capacity, built of 26-gauge, hot galvanized, copper-bearing sheet steel. The drinking-pan extends all the way around the Waterer, allowing ten to fifteen birds to drink at one time. The water-level is controlled by a copper float.

This Waterer will take care of 150 hens for a full day. The lamp is exceptionally well made and will burn for at least ninety hours without refilling.

For ease of cleaning there is nothing else like it and in general it is the greatest value on the market in a heated Waterer. An excellent investment. A special stand with perches as shown in cut can be supplied for this Waterer. This sanitary feature holds the water sufficiently high from floor so that the hens can not scratch filth and litter into the drinking-pan.

DB-812 Lamp-heated Waterer, with Lamp and Lamp Base. Weight 21 lbs. \$7.90. Without Lamp. Weight 19 lbs. \$7.

DB-845 Stand for 8 gallon Waterer. Weight 20 lbs. \$1.50.



The Drew Giant Chick Feeder

The Drew Giant Chick Feeder is especially designed to care for flocks of 200 to 300 chicks. The feeder is 35 inches long, 17 inches high, and 11 inches wide at the base. It holds about 50 pounds of chick mash and it will permit about 50 chicks to feed at one time.

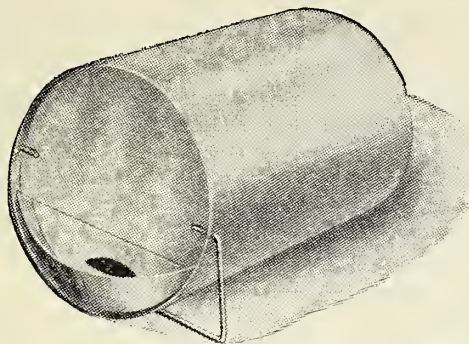
There are 34 egg-shaped feed openings with folded smooth edges. The scientifically designed hopper prevents too rapid flow of feed and thus eliminates possibility of waste.

A removable cover at top is provided for convenience in filling. The wire tilting device on the cover prevents chicks from roosting on the top and fouling the feed and spreading disease.

There are adjustable guards on either side which can be raised to prevent chicks from pulling feed onto the ground. The design of this Feeder is such that you can continue feeding the flock from the Drew Giant until the chicks are from three to five months old with excellent results. This is an ideal feeder for the flock of 200 or more chicks.

DB-836 Drew Giant Chick Feeder. Weight 23 lbs. \$5.95.

Drew Handy Pail-Type Waterer



This is a handy type of Waterer for small flocks. The pail-type feature is mighty practical and you will appreciate its convenience. Made of best copper sheet steel, rust-resisting, built for service. Two styles, insulated and non-insulated, and four sizes.

	Capacity	Weight	Price	Postpaid
DB-501 Non-insulated	1½ gals.	4 lbs.	\$1 20	\$1 35
DB-502 Non-insulated	3 gals.	6 lbs.	1 85	2 05
DB-503 Insulated	1 gal.	6 lbs.	2 20	2 40
DB-504 Insulated	2 gals.	9 lbs.	2 95	3 20

The Drew Grit and Shell Hopper

Drew Grit, Shell, and Charcoal Hoppers are built of 26-gauge copper sheet steel, heavily galvanized and riveted. This is a very satisfactory, inexpensive, 3-compartment Hopper for use with wall feeders. Size, 12 inches high, 9 inches wide, 6½ inches deep.

DB-523 Grit and Shell Hopper. Weight 6 lbs. \$1 25 Postpaid \$1 45

For other DREW LINE POULTRY EQUIPMENT, see the following pages:

Drew Wall Mash Feeder, page 179.

Drew All-Metal Lice-Free Nests, page 188.

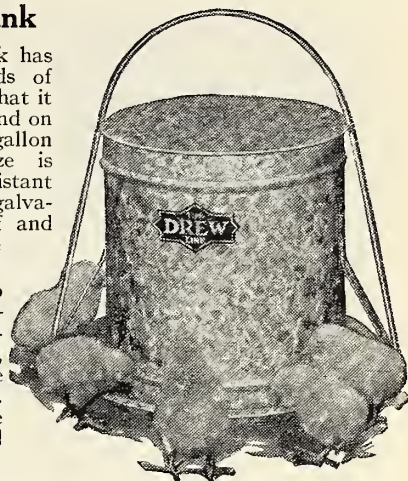
Ask for special circular of Drew Line Poultry Equipment not shown in this catalogue

Drew Chick Tank

The Drew Chick Tank has been used by thousands of poultry men who claim that it is the best thing of its kind on the market. This 1½-gallon capacity, 100-chick size is built of heavy rust-resistant copper-steel, heavily galvanized. It is rust proof and sturdy—an ideal, large capacity Waterer.

There are only two parts to this Waterer—the bucket and the watering pan. It saves time, worry, work and trouble in watering large flocks. You will appreciate the value of this economical Drew Waterer.

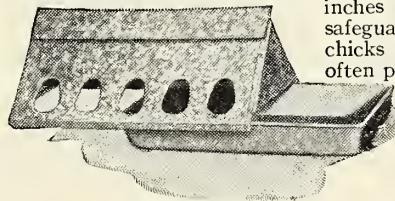
DB-507 Chick Tank. Wt. 6 lbs. Price \$1.35, postpaid \$1.55.



The Drew Sour-Milk Feeders

WITH NON-POISONOUS ALUMINUM CONTAINER

Here is a superior Feeder for sour milk or buttermilk. Its large aluminum pan is 11 inches long, 6 inches wide, and 1½ inches deep, is non-poisonous, safeguards the life of your chicks from a danger that too often prevails in feeding of sour milk or buttermilk from ordinary feeders.



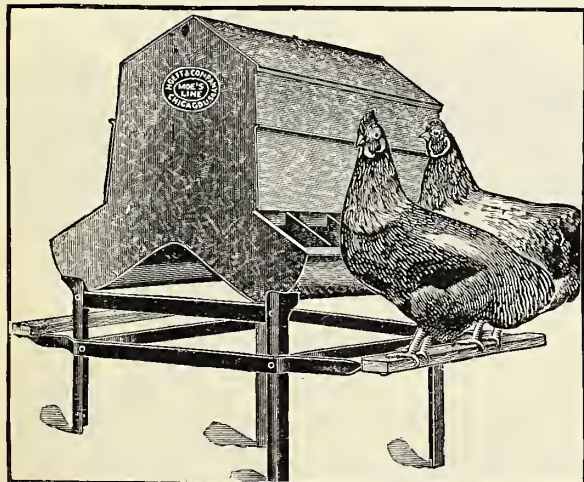
DB-805, open

This Drew Feeder is equipped with a sliding cover, specially designed as shown above, with a tilter to prevent

chicks from perching on the feeder and fouling the feed. Its large capacity makes frequent filling unnecessary. Easy to clean and sanitary and safe in every way. Strong and will give real service for many years.

Sour milk and buttermilk fed in this container will save your chicks and make real money for you. The egg-shaped feed-holes have smooth, folded edges.

DB-805 Sour Milk Feeder. Weight 1¼ lbs. \$1 00 Postpaid \$1 15



Moe's Mammoth Dry-Mash Hopper

A large capacity Hopper built on correct principles. Made of heavy galvanized iron, strong and substantial in every detail.

Has many excellent features; for instance, it will accommodate a full 100-pound bag of mash, doing away with the annoyance and waste of having a partly empty bag of mash on the premises. The feed is within easy reach of the chickens, and is protected from the weather and from the ravages of rats and mice.

The taper shape and interior construction provide a uniform automatic feed, and the wire grid and cross wires prevent any waste.

The stand is of heavy angle iron, painted, and has wooden bars for the poultry to rest on when feeding.

Length of hopper 35 in., width 21 in., height 18½ in. Capacity 100 lbs.

Height of stand 15½ in., total height 34½ in.

No. 3. Hopper and Stand complete, \$12.

Norwich Automatic Feeder

Endorsed and recommended by the leading poultrymen, state colleges, professors of poultry husbandry, and students of poultry culture as the only **perfect Feeder** on the market. Operates with any grain feed or mixture; never out of order, and will last a lifetime.



In operating the Norwich Automatic Exerciser and Feeder, it is but necessary to fill the hopper with such grain feed as may be desired, straight or mixed, filling the feed-bar with either cracked corn or wheat, and adjust the valve at the bottom of the hopper to feed in such quantities as desired. Fitted with adjustable legs, the machine may be stood anywhere in the yard, pen, house, or on free range, and is adjustable for baby chicks or adult fowl. As a baby chick Feeder it has no equal. As the birds grow, the legs can be lengthened to meet their requirements so that one Feeder does for all sizes of birds.

The hopper being rain-proof, the feed is always dry and fresh. No matter how hard it rains, not a drop of moisture can enter it. The feed-bar, being under the deflector, is protected from rain as if under an umbrella, and in consequence the feed in it is always dry and inviting.

The machine is absolutely rat- and bird-proof, and eliminates completely the element of waste in the poultry plant, estimated by experts as high as 25 per cent. It reduces the labor of feeding to filling the hopper when empty, and increases egg-production as high as 18 per cent.

PRICES

	Each
No. 1. 8-quart Hopper.....	\$4 00
No. 2. 14-quart Hopper.....	4 50
No. 3. 20-quart Hopper.....	5 00
No. 4. 32-quart Hopper.....	5 50

The Peerless Self-Feed Hopper

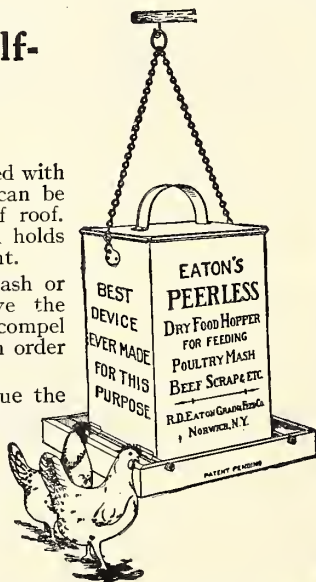
HOW TO USE IT

An automatic pulley is supplied with every Peerless Hopper, which can be easily attached to any style of roof. This pulley grips the cord and holds the Hopper at any desired height.

Fill the Hopper with dry mash or grain, and hang it well above the floor or pen, high enough to compel the birds to arch their necks in order to reach the feed.

You cannot afford to continue the wasteful use of open boxes and pans for the feeding of poultry mash and grains.

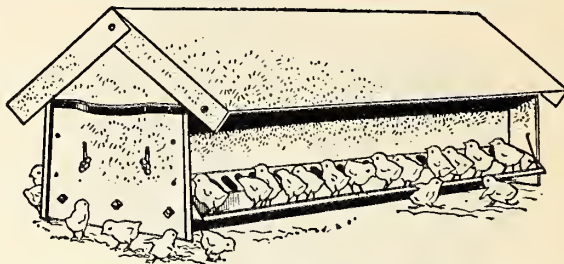
It is the only Hopper that is absolutely rat-proof all the time, day and night, which needs no attention except re-filling when empty.



PRICES

	Each	Postpaid
8-qt. size, for 10 to 15 birds.....	\$2 00	\$2 25
16-qt. size, for 15 to 30 birds.....	2 50	2 75
32-qt. size, for 30 to 50 birds.....	3 50	3 85

Adjustable Dry-Mash Feeder



"One feeder does the work of three." It is just as practical for the growing flock and matured fowls as for the baby chicks. A handy quick adjustment makes this possible. Made of heavy galvanized iron; adjustable steel legs. Feeds from both sides—has 5 feet of feeding-space. Holds more than a bushel. No. 35, \$6.50.

"Bar-Nun" Dry-Mash Hopper

It Saves the Feed. Holds 15 quarts

It is inaccessible to rats or mice, yet easily accessible to poultry at all times. By its use, a constant supply of fresh, clean feed is always kept before them.

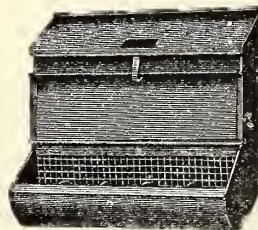
Used suspended by a spiral spring; furnished with hopper; clogging or packing of feed is prevented. The mash feeds down automatically as the poultry pick it away from the trough.

Poultry cannot perch on it or scratch mash out of it. Simply hang the hopper so that the birds have to reach up to pick out of the trough; this gives a clear floor-space and prevents them from picking over the mash.



Note the inward-sloping sides of the feed-pan—an exclusive feature of the "Bar-Nun" Hopper.

Price \$2.75; postpaid \$3



Improved Handy Hopper

The Improved Handy Hopper is made of galvanized iron throughout. All parts are spot-welded together. It is provided with hinged lid over both hopper and trough,

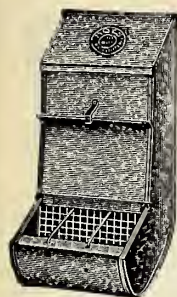
making it rat- and mouse-proof, as well as dirt-proof.

It is provided with a swinging front, adjustable to suit any kind of dry mash and which eliminates any possibility of clogging.

Hopper is 15 inches in height, 4½ inches in width, and made in four lengths.

PRICES

	Each	Postpaid
B 12. 12 inches long.....	\$1 75	\$2 00
B 13. 18 inches long.....	2 25	2 50
B 14. 24 inches long.....	2 75	3 10
B 15. 36 inches long.....	3 90	



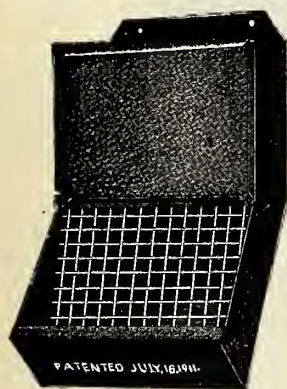
Moe's Dry Mash Hopper

The curved bottom of the Hopper keeps the feed within easy reach of the birds. The gradual enlargement from the top to base prevents clogging. The wire grid and the wires running from the flange through the wire grid prevent any chance of the fowls throwing out or wasting the feed. The sloping cover prevents the birds from roosting on the Hopper, and when both covers are closed, it is rat- and mouse-proof. A trial will convince you that it is a Hopper of the greatest merit. Manufactured of heavy galvanized iron in four sizes.

	Each	Postpaid
No. 35. 8½ inches wide—10 qt.	\$1 50	\$1 70
No. 36. 12 inches wide—14 qt.	1 95	2 20
No. 13. 18 inches wide—22 qt.	2 25	2 50
No. 37. 24 inches wide—32 qt.	2 75	3 00

Sexton's Dry Feed Hopper

EASY TO FILL—NO WASTE—RAT-PROOF—DUST-PROOF



Open



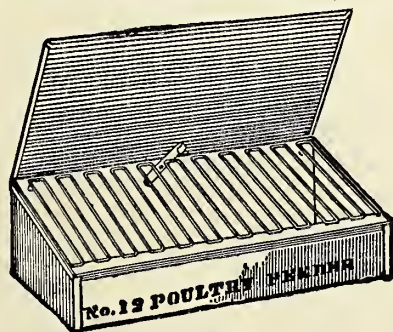
Closed

This Hopper is arranged to hang on the wall the desired distance from floor and never need be removed from the wall to be refilled. It is impossible to waste any feed as the pan at the bottom takes any feed that may be picked out and the last crumb can be used, therefore saving any waste. The body being covered keeps feed dust-proof, clean, and always dry.

Body made of galvanized iron and the grating is of round galvanized wire preventing the poultry from cutting their bills.

	Each	Postpaid
3-quart.	\$1 25	\$1 45
12-quart.	1 75	2 05
24-quart.	3 25	3 65

Felker's Dry Mash Feeder



These Feeders are dirt- and rat-proof, and are protected from waste by an especially designed grid. Should be hung on the wall by two nails, as high as the fowl can reach with ease.

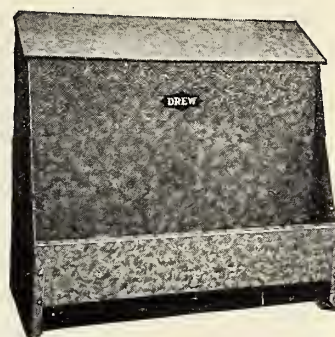
	Each	Postpaid		Each	Postpaid
12-inch.....	\$0 75	\$0 90	24-inch.....	\$1 15	\$1 40

The Drew Wall Mash Feeder

The Drew Wall Mash Feeder holds 20 pounds of egg mash. It was designed particularly for flocks of twenty to thirty hens, and it is built with a specially deep feed-trough to prevent hens from wasting mash. Made of hot galvanized copper steel—will last a lifetime. Designed to be hung on wall—a convenient feature.

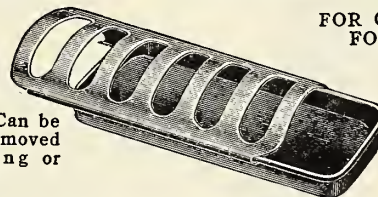
The DB-840—same design as the DB-820 but 35 inches long—holds 40 pounds of egg-mash, will accommodate from forty to fifty hens.

	Each	Postpaid
DB-820 Wall Mash Feeder. Weight 15 lbs.	\$3 00	\$3 30
DB-840 Wall Mash Feeder. Weight 25 lbs.	4 10	



Moe's Sanitary Feeding Trough

FOR GROWN FOWLS



Sliding Top Can be Quickly Removed for Cleaning or Filling

Suitable for dry feed, wet mash, or water.

The top slides off, so the pan can be easily cleaned, and filled.

Made of best quality galvanized iron, accurately stamped with dies. The edges of the slotted openings are all turned over and smoothly finished. No sharp or rough edges to injure the chicks.

The feed saved by using Moe's Troughs will more than pay their cost in a short time. Made in three sizes.

	PRICES	Each	Postpaid
No. 21. 12 inches long.		\$0 25	\$0 35
No. 22. 18 inches long.		45	55
No. 23. 24 inches long.		60	70

Stoneware Rabbit Feeder

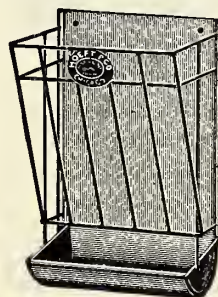
7¼-in. diam. \$0 30 \$0 45



Moe's Rabbit Feed Rack

For holding roots or hay, alfalfa, clover, etc. It prevents scattering hay and wasting. The round trough at the bottom catches the small tender leaves. Feed saved soon pays for the Rack.

Price 75 cts.; postpaid 90 cts.

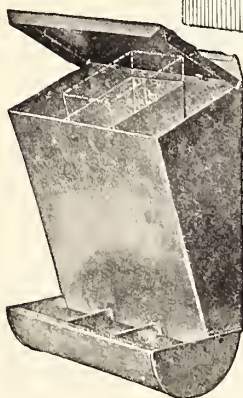
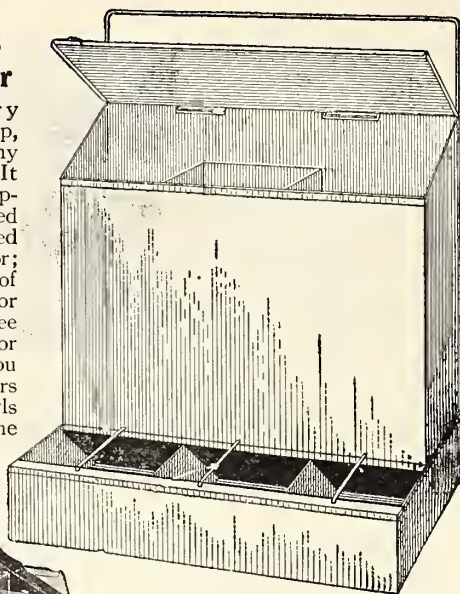


We carry many lines of goods in stock that are not listed in this catalogue, and for this reason invite correspondence regarding the wants of our customers. If we cannot furnish the article inquired for, we will endeavor to inform the inquirer where it can be had.

The 1—2—3 Poultry Feeder

Used for dry mash, beef scrap, grit, shells, or any kind of dry feed. It is made with a separator. When used for one kind of feed take out separator; for two kinds of feed, put separator in one end; for three kinds put separator in center, when you have three feeders in one. The fowls cannot waste the feed.

Price \$1.35, postpaid \$1.55



Sexton Grit and Shell Box

Made of galvanized iron with hinged cover. The bottoms of these boxes are rounded, which prevents the grit from clogging. Also arranged with portable partitions, so that they may be made into one, two or three compartments as desired.

	Capacity	Each	Postpaid
No. 1.	4 quarts	\$1 25	\$1 45
No. 2.	6 quarts	1 40	1 65

O. K. Grit and Shell Box

Chickens should have grit, oyster shell, and charcoal always before them; and for this purpose, this Grit and Shell Box is indispensable.

It is made of galvanized steel, with three compartments.

Chick size: height, 7½ inches; width, 6 inches; depth (front to back), 4 inches at bottom and 2 inches at top. Hen size: height, 10½ inches, width, 9½ inches; depth (back to front), 6 inches at bottom and 2½ inches at top.



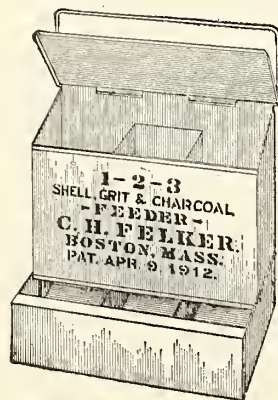
	Each	Postpaid
Chick Size.....	\$0 85	\$0 95
Hen Size.....	1 10	1 25

The 1—2—3 Shell, Grit and Charcoal Feeder

Holds about three quarts

A very convenient size for a pen of fowls. Will serve for one, two or three kinds of feed by using the separator.

Price 75 cts., postpaid 90 cts.

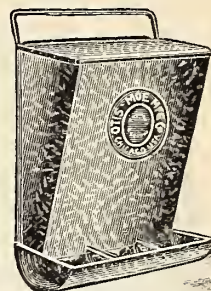


Moe's Grit and Shell Box

The feeding of grit, ground shells, and charcoal is now recognized as an essential part of the diet, to keep fowls in healthy, prime condition.

Can also be used as feed-hoppers for little chicks.

Made of heavy galvanized iron in three sizes. The No. 45 for baby chicks has a square bottom, the other sizes have round bottoms. No solder used in their construction.



PRICES

	Each	Postpaid
No. 45. Two compartments.....	\$0 40	\$0 50
No. 9. Three compartments.....	85	1 00
No. 90. Four compartments.....	1 10	1 25



Moe's Eclipse Feeding Troughs

A new popular-priced Feeding-Trough, made of galvanized iron and intended for chicks and growing stock. The pan and top are both stamped in one piece, no seams, rivets or solder used. Sliding top makes them easy to fill and keep clean. Made in two sizes.

PRICES

	Each	Postpaid	Doz.	Postpaid
No. 27. 10 inches long.....	\$0 20	\$0 30	\$2 15	\$2 35
No. 28. 20 inches long.....	30	40	3 25	3 50

Eclipse Aluminum Feeding Troughs

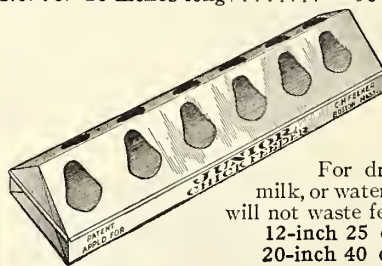
Same design as the Eclipse above

Buttermilk Feeding Troughs, made of pure aluminum, which is not affected by the acids of milk and similar feeds.

The Trough and top are each stamped in one piece, no seams, rivets or solder used. Sliding Top makes it easy to clean and fill. Made in two sizes.

PRICES

	Each	Postpaid	Doz.	Postpaid
No. 69. 10 inches long.....	\$0 50	\$0 60	\$5 40	\$5 60
No. 70. 20 inches long.....	90	1 05	9 75	10 00



The Junior Chick-Feeder

One of our most popular Feeders

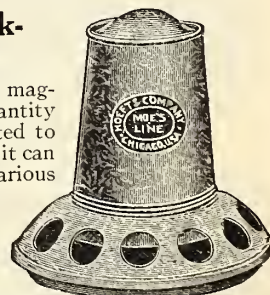
For dry mash, hard grain, sour milk, or water; is practical and sanitary; will not waste feed. Chicks cannot foul it. 12-inch 25 cts.; postpaid 35 cts. 20-inch 40 cts.; postpaid 55 cts.

Moe's Magazine Chick-Feeder and Waterer

A new round Chick-Feeder with a magazine or container to hold a good quantity of feed. The upper magazine is fitted to the feeder top with a spiral thread so it can be adjusted up or down to feed the various kinds of grain. It can also be used as a drinking-fountain, as the magazine is water- and air-tight.

Diameter of feeder 8¼ inches. Capacity 2 quarts. Height 8½ in.

No. 18. Moe's Chick-Feeder. Each 50 cts., postpaid 60 cts.



Moe's Round Baby Chick-Feeder



A great feed-saver, as the little chicks cannot get into it and contaminate the feed. Can also be used for water. This is not a novelty, but a practical, well-made, feeding device that will last for years.

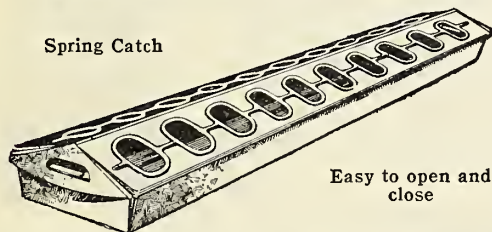
Made of the best grade of galvanized iron. Chicks cannot upset it.

	Each	Postpaid	Doz.	Ppd.
No. 11. 8 feeder holes.....	\$0 10	\$0 20	\$1 00	\$1 20
No. 12. 12 feeder holes.....	20	30	2 00	2 25
No. 12. Porcelain Enameled...	75	85		

Stand 1 3/4 in. high, to raise feeder out of litter, 5 cts. extra.

Spring-Catch-Cover Chick Troughs

Spring Catch



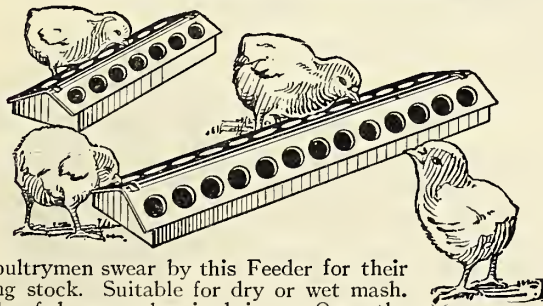
Easy to open and close

This new spring-catch flat bottom Trough is stamped into shape with dies, as shown in cut, thus making it strong and substantial as it has no soldered seams. The cover is fastened to the Trough by means of a spring catch, which makes the Trough as easy to open and close as a watch-case.

These Troughs are made in two lengths. The No. 11 has ten holes and the No. 21 has twenty holes.

	Each	Postpaid	Doz.	Ppd.
No. 11. 10 inches long.....	\$0 20	\$0 30	\$2 15	\$2 35
No. 21. 20 inches long.....	30	40	3 25	3 50

The Keystone Chick-Feeder



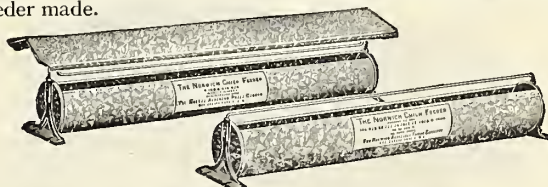
Poultrymen swear by this Feeder for their young stock. Suitable for dry or wet mash. Made of heavy galvanized iron. Over the trough is a specially constructed gable-shaped grate, which prevents chicks wasting the contents or climbing into their feed. Special construction of fitting top prevents sticking. Can be easily removed and put on. Made in two sizes.

	Each	Postpaid	Doz.	Ppd.
10-inch Trough; 14 holes.....	\$0 20	\$0 30	\$2 15	\$2 35
20-inch Trough; 26 holes.....	30	40	3 25	3 50

The Norwich Chick-Feeder



For the purposes for which it is intended, the Norwich Chick-Feeder is unquestionably the best device that has ever been invented. It is used for feeding mash, chick-feed, or sour milk. The rod crossing the top of the machine prevents the chicks from getting into the feed and its use eliminates absolutely all waste. The machine is made of tight coated galvanized sheeting, malleable iron ends, securely riveted, and is the strongest and best Feeder made.



For outside use the Feeder is made with a removable rain-top which not only protects the feed from showers followed by a hot sun that quickly sours the mash and is responsible for losses running into the thousands, but also prevents the older fowls from appropriating the chicks' feed—the cause of many a stunted flock.

Made in one size only—

	Each	Postpaid
20-in., with Rain-Top	\$1 00	\$1 20
20-in., without Rain-Top	75	85

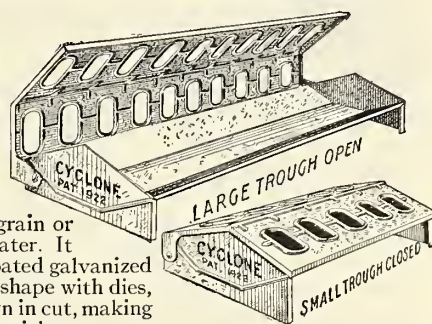
Hinged-Cover Chick-Troughs

Pat. Dec. 5, 1922

This cut shows No. 20 Hinged-Cover Chick-Trough open for filling and cleaning. It closes like No. 10.

EASY { TO OPEN
TO CLOSE
TO CLEAN
TO FILL

A practical device for dry mash, hard grain or grit, sour milk, or water. It is made from tight coated galvanized metal, stamped into shape with dies, and is ribbed as shown in cut, making it strong and substantial.



HINGED COVER

The cover, which has openings through which the chicks feed, is hinged to the trough, making filling and cleaning easy, also prevents spilling the feed and losing the top.

TWO SIZES—LARGE CAPACITY

The peculiar construction adds to the capacity of the Troughs, which are made in two lengths only, 10 and 20 inches. Both lengths 3 inches high and 5 inches wide.

	Each	Postpaid	Doz.	Ppd.
No. 10. 10 inches long	\$0 25	\$0 35	\$2 70	\$2 95
No. 20. 20 inches long	40	50	4 25	4 60

Moe's Single Feeding-Troughs

For Chicks and Growing Stock

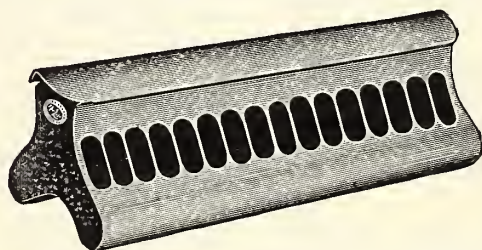


Made of best quality galvanized iron, accurately stamped with dies. No sharp or rough edges to injure the chicks. Made in three sizes. Can be hung on the wall.

		Each	Postpaid
No. 55.	12 inches long.....	\$0 30	\$0 40
No. 56.	18 inches long.....	40	50
No. 57.	24 inches long.....	50	65

Moe's Double Feeding-Troughs

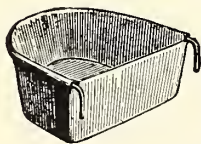
		Each	Postpaid	Doz.	Postpaid
No. 58.	12 inches long.....	\$0 35	\$0 45	\$3 75	\$4 00
No. 59.	18 inches long.....	50	60	5 25	5 55
No. 60.	24 inches long.....	60	75	6 50	6 85

Moe's Large Capacity Feeder

A wonderful Feeder for young growing stock. The birds cannot roost on the cover or sides. Made of heavy galvanized iron.

Has a sliding top cover, easy to fill and clean.

No. 140.	21 in. long; 8½ in. wide; 7 in. high. Capacity 10 qts. 16 openings on each side.....	\$1 20	Postpaid \$1 35
No. 141.	35 in. long; 8½ in. wide; 7 in. high. Capacity 17 qts. 27 openings on each side.....	1 80	2 00

Acme Feed or Water Cups

Made of galvanized iron. They are made to hang inside of exhibition coops or cages, and can be used for birds or small pet animals.

	Each	Postpaid
No. 0.	4¼ x 3⅛ x 2¼ in..	\$0 15
No. 1.	5⅛ x 3½ x 2½ in..	20
No. 2.	7¼ x 3½ x 2½ in..	30

Moe's Feed and Water Cups

A practical and convenient Cup made to hang on the side of exhibition coops. Capacity about 1 pint.

Hangs straight on the side of the coop.

No. 61.	15 cts. each, postpaid 20 cts.; doz. \$1.60, postpaid \$1.75.
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**Economy Chick Fount METALLIC RUST-PROOF**

Diameter of pan, 5 inches. Height, 4 inches. Holds one pint. An excellent Fountain for the little chicks. Enough clean water all the time, but chicks cannot get into the pan.

	PRICES	Postpaid
Each.....	\$0 15	\$0 20

Oakes Two-Piece Fountain

This Fountain consists of a cone-shaped bucket or can and a stamped pan which forms the base and the trough from which the fowls drink. Both parts are made of galvanized sheet steel.

	Each	Postpaid
1-quart.....	\$0 30	\$0 35
2-quart.....	45	55
3-quart.....	60	70

Felker's Cone Fountain

For chickens and pigeons. A new and practical two-part attachable Drinking-Fountain. It being attachable makes it easy to move from place to place and it is not easy to tip over.

	Each	Postpaid
1-quart.....	\$0 30	\$0 35
2-quart.....	40	50



Pat. applied for

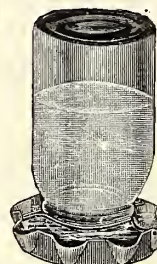
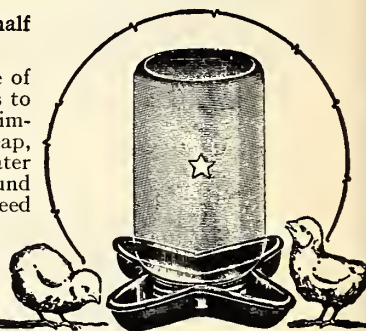
The Star Jar Fountain and Feeder

Will fit pint, quart or one-half gallon Mason jar

Manufactured of one piece of non-rusting metal. No parts to come unsoldered. Leaking impossible. Convenient, cheap, and sanitary. Provides greater drinking surface than the round fountain. Can be used for feed as well as water.

Price, without Jars, 10 cts. each, postpaid 15 cts.; doz. \$1.10, postpaid \$1.30.

Stand 1¾ in. high, to raise fountain out of litter, 5 cts. extra.

**Automatic Jar Fountain and Chick-Feeder**

This appliance for chicks feeds water, grain, grit, etc., automatically. It is an absolutely sanitary fountain made to fit any half-gallon, quart, or pint Mason jar. The pan on this fountain is hinged to wire that supports the jar, so that it is not necessary to remove the jar to refill. We do not furnish jars.

Patented January 7, 1919

	PRICES	Postpaid
Each.....	\$0 10	\$0 15
Doz.....	1 10	1 30

Felker's Handy Attachment

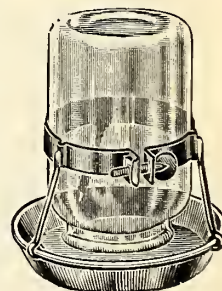
To be used with any make of Fruit Jar

A PERFECT FEEDER

For sour milk, water, hard grain or grit

The container is made of aluminum, the only metal in which sour milk can be fed with safety. It is rust-proof and non-corroding. The Handy is adjustable, simple to operate and durable. Every one has some kind of a quart fruit jar—the Handy fits them all.

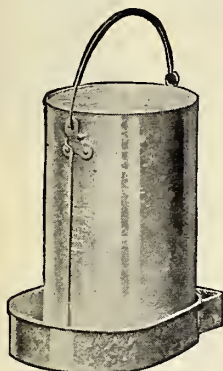
	Postpaid
Each.....	\$0 25
Half dozen.....	1 40
Dozen.....	2 75



Pat. applied for

Keystone Drinking Fountains

Will sit alone while being filled, and can be filled from bucket or faucet. Bail handle makes it convenient to carry



Method of filling

These Fountains are made of black sheets and galvanized afterwards. No solder is used in making them.

The construction of this Fountain has made it the favorite and it is now considered the most practical, convenient, and one of the best on the market.

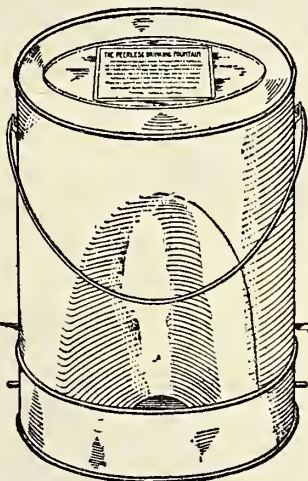
Hangs above floor or ground so that water is always clean.

Easy to Fill—Easy to Clean. Made in Four Sizes

Size	PRICES	Each	Postpaid
1-quart.....	\$0 45	\$0 55	
2-quart.....	65	75	
1-gallon.....	90	1 10	
2-gallon.....	1 40	1 60	

The Peerless Sanitary Drinking Fountain

The water is always pure as it is protected from dirt and filth. The fowls cannot injure their combs when drinking; easy to clean and fill; simple in construction; durable and practical. It is adjustable; the top and bottom can always be made to fit. Should it work too loose, take the Fountain apart and pull sides out; if too tight, press sides in.



Patented January 18, 1910

PRICES	Each	Postpaid
1-quart.....	\$0 35	\$0 40
5-quart.....	90	1 05
10-quart.....	1 25	1 50

Lectro-Warm Electric Fountain Heater



Keeps drinking-water from freezing, even in zero weather. Safe and easy to use. No danger of fire or explosion. Cost averages about a cent a day. Used with any type fountain, pan, crock, or bucket. Set water vessel on Heater and turn on current.

That's all there is to it! No adjusting! No regulating! No watching! Pays for itself in winter eggs. Heater is 8 inches in diameter, 1½ inches high, and made of heavy galvanized metal. Built for service. Can be used satisfactorily for a heater in a small home-made brooder, also auto sprouter. Money promptly refunded if unsatisfactory after 10 days' trial. When ordering, state voltage of your electric current.

\$2.50 each; postpaid \$2.60.

Moe's Bottom-Fill Fountain

The chicks cannot get into the basin to foul the water nor to drown, and will not roost on the top. They are easily cleaned, are light and durable, and will not freeze and burst in winter.



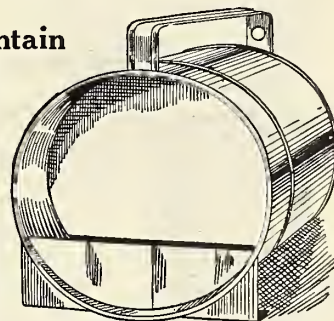
	Each	Postpaid
No. 19. 1-quart.....	\$0 25	\$0 35
No. 20. 2-quart.....	40	50
No. 24. 1-gallon.....	50	65

The Boston Fountain

Easily Filled. Easily Cleaned
Nothing to Get Out of Order

This Fountain is very popular and gives excellent satisfaction. It is handy and very durable, being made of galvanized iron, double-seamed together.

	Each	Postpaid
1-quart.....	\$0 50	\$0 60
2-quart.....	75	85
4-quart.....	1 00	1 20
8-quart.....	1 35	1 60



Duplex Fountain

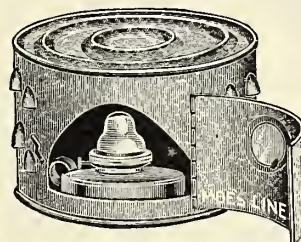
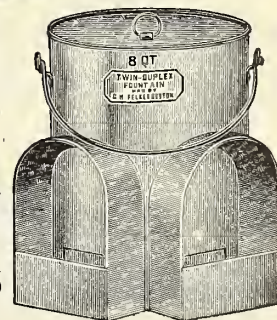
The latest and most practical sanitary Fountain on the market. This is a double fount, keeping the water clean and pure. Easy to fill. Easy to care for. Made in two sizes.

	Each	Postpaid
1-gal.....	\$1 15	\$1 30
2-gal.....	1 40	1 65

Twin Duplex Fountain

Constructed with two water fronts which doubles the drinking capacity.

	Each	Postpaid
2-gal.....	\$1 65	\$1 90
5-gal.....	3 00	



Moe's Fountain Heater

Can be used with all styles of fountains, and effectively prevents water from freezing.

Effectively solves the problem of a uniform supply of fresh, clear water at all times, no matter how cold the weather.

It is also an excellent heater for small brooder.

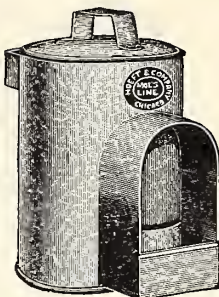
The lamp fount or bowl holds sufficient kerosene to burn continuously for seven days. Simple and safe. Nothing to get out of order. Height, 7 in.; diam., 11 in.

No. 10. Each \$1.90; postpaid \$2

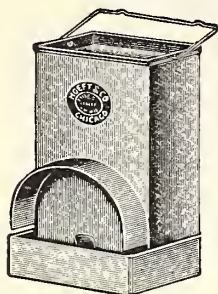
Moe's Improved Wall Fountains

Made of heavy galvanized iron, in three sizes. The covered outlet keeps out dust and dirt, and the outlet is further protected by a removable plate which prevents any floating rubbish from being drawn into the reservoir.

	Each	Postpaid
No. 97. 2-quart.....	\$0 90	\$1 00
No. 98. 1-gallon.....	1 00	1 15
No. 99. 2-gallon.....	1 40	1 60



Moe's Drop-Bottom Wall Fountain



A practical, durable Fountain. Easy to fill and easy to clean. Made of best quality galvanized iron. May be hung on the wall out of the litter and dirt.

Suitable for chicks, fowls or pigeons. Fitted with wire handles, so that two or more Fountains, back to back, can be carried in one hand.

Made in three sizes.

	Each	Postpaid
No. 40. 2-quart.....	\$0 90	\$1 00
No. 41. 1-gallon.....	1 00	1 15
No. 42. 2-gallon.....	1 35	1 50

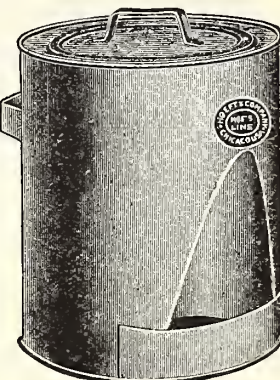
Moe's 5-Gallon Wall Fountain

A large capacity Fountain, made of heavy galvanized iron.

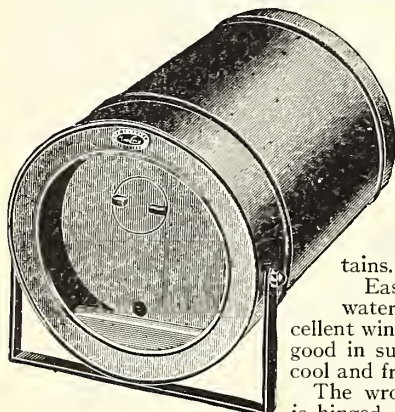
This style appeals to many breeders, as it is a strong substantial Wall Fountain at a low price. Excellently adapted for watering pigeons. Easily filled and nothing to get out of order. Height 13 inches; diameter 11 inches.

PRICE	Each	Postpaid
No. 74. 5-gallon..	\$1 75	\$2 00

With Moe's No. 10 Heater, shown on page 183, \$3.65; postpaid, \$3.90.



Moe's Insulated Double Wall Fountain



Made of best quality galvanized iron, with double walls packed with an efficient insulating material. Has a large filler opening so it can be easily cleaned, which is a very important feature, and one that is lacking in most insulated Wall Fountains.

tains.

Easy to fill, and feeds the water automatically. An excellent winter Fountain, and equally good in summer to keep the water cool and fresh.

The wrought iron stand or rest is hinged, and acts as a handle to carry the Fountain.

Plenty of fresh water at the right temperature, in zero or torrid weather will keep your birds healthy and increase the egg-yield.

No. 8. 3-gallon. \$4 each, postpaid \$4.25.

Moe's Wall Fountains

Removable Bottom

Easily Cleaned

A practical and convenient style of Fountain, made of heavy galvanized iron. Can be hung on the wall, up out of the litter.

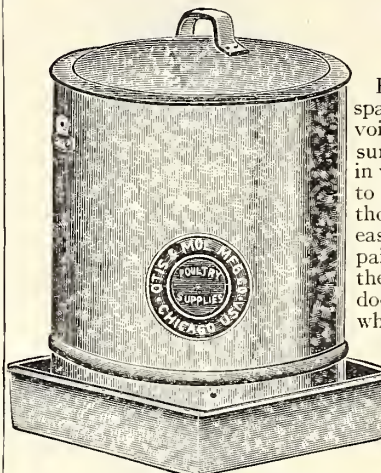
A very popular style with many breeders. Made with a removable bottom, so that all parts may be easily cleaned and kept in a sanitary condition.

No. 26. Capacity about 1 gallon.

65 cts. each, postpaid 80 cts.



Moe's Top-Fill Fountain



Fills from the top. Dead air-space between cover and reservoir keeps water cool in the summer, and retards freezing in winter. There are no valves to get out of order. It is thoroughly sanitary and as easily cleaned as an ordinary pail. It protects the fowls from their own contamination. It does away with slopping over when being filled. It supplies just enough pure water and no more. Manufactured of heavy galvanized iron in three sizes. Can be used for two pens at the same time.

PRICES

	Each	Postpaid
No. 1. 1-gallon.....	\$1 75	\$1 90
No. 2. 2-gallon.....	2 50	2 70
No. 4. 4-gallon.....	3 00	3 20

Automatic Chick-Greaser

EVERY CHICK ITS OWN DOCTOR



It is the large lice which collect on the heads of young chickens which cause them to droop and die. Formerly, the only way to get rid of these lice was to catch each chick and rub grease on its head, but this slow and tedious process is not necessary since the invention of the Automatic Chick-Greaser.

The wick around the upper part of the Greaser is saturated with oil (a mixture of two-thirds lard and one-third kerosene or black oil) and every chick which eats out of the pan will get its head thoroughly greased in a very few minutes.

\$1.25 each, postpaid \$1.40

DAY-OLD CHICKS

We make a specialty of furnishing our customers with Day-Old Chicks of all leading breeds, from high-bred stock. When you are ready to place your order for chicks let us know the breeds, the number of chicks, and the delivery desired, and we will quote you prices.

The Norwich Automatic Air-Lock Fountain

Recent tests of the Missouri State Board of Poultry Culture have proved conclusively that unless birds are furnished a continuous supply of water their egg-production is curtailed 50 per cent and the loss is the same in all the varieties. The bulletin on the subject further states that in winter egg-production, water is actually worth in dollars and cents just as much as grain.

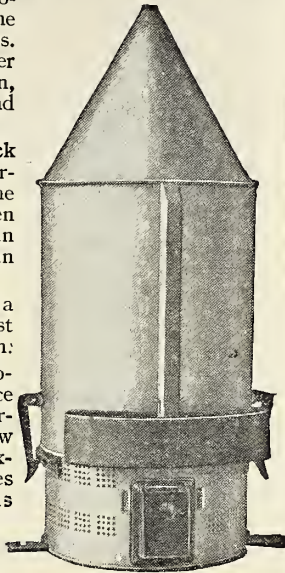
The Norwich Automatic Air-Lock Fountain furnishes a continuous water-supply with the chill removed, and the birds will consume from four to ten times the amount of water from it than where water is furnished from an ordinary vessel.

Eggs are 74 per cent water, and a moment's thought will show the vast importance of water in egg-production:

This machine will double the production of birds given cold water once or twice a day. The Fountain is guaranteed frost-proof to 20 degrees below zero, and has been operated in the extreme North at 32, 47, and 60 degrees below zero, and furnishes a continuous water-supply at just the right temperature to induce the birds to drink.

It is hygienic, easily cared for, top filled, positive in action, with no working parts and nothing to get out of order. As a summer Fountain it has no equal, as the water from it is much cooler than the surrounding atmosphere. With ordinary care the Fountain will last for years and give absolute satisfaction summer and winter.

We have sold a large number of these Fountains and cannot speak too highly of their merits. Made in one size only, 5 gallons capacity.



PRICES

	Each	Postpaid
Complete with Burner Base	\$6 00	\$6 40
Without Burner Base	3 50	3 85
Burner Base Only	3 50	3 70

Write for Special Circular

Ideal Sanitary Fountain

The simplest, handiest, and most practical Fountain made. Keeps water the right temperature all the year. Has no lamps to trim, and valves to get out of order. Saves time, labor, and worry, and costs nothing to run.

The Fountain is made of galvanized iron, and is similar in construction to the fireless cooker, being packed with a non-conducting material to retain the temperature of the water. The drinking cup, which contains the only water exposed, forms a connection between the outer and inner can, and does not project beyond the outer can, there being no possible chance for droppings, the cause of much disease, to get into the water. Keeps water cool in summer and warm in winter.



PRICES

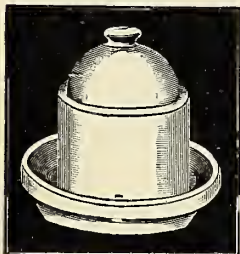
	Each	Postpaid
2-gallon	\$3 50	\$3 75
3-gallon	4 00	4 25
5-gallon	5 00	

Stoneware Poultry Fountains

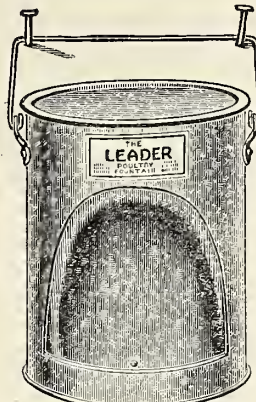
Saucer detached from top

	Each	Doz.
1/4-gallon	\$0 50	\$5 50
1/2-gallon	60	6 50
1-gallon	75	8 00
2-gallon	1 25	13 75

By Freight or Express Only



Leader Fountains



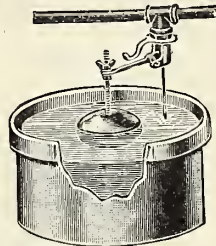
Pat. applied for
1 1/2-gal. size, 85 cts. each;
postpaid \$1



Pat. applied for
3-gal. size \$1.50 each.
postpaid \$1.70

A new sanitary fountain, practical to use, easy to keep clean. A saving of from 30 to 40 per cent over any fountain of its size. The 3-gallon size has two drinking-spaces, making it very convenient for a large pen of fowls. These fountains hang on the wall with two nails one at each angle of the bail.

Moe's Automatic Poultry Fountain



A perfect automatic valve and float, to regulate the flow of water to a drinking-dish. The valve mechanism is entirely of brass, nickel finish, with nothing about it to rust or clog up. Positive in action.

The valve can be attached to any iron water pipe, or to a barrel or tank, and insures a continuous, automatic supply of water, without waste.

Valve is threaded for 3/4-inch iron pipe.

No. 31A. Automatic Valve and Pan complete, as illustrated, \$1.25, postpaid, \$1.40.

Doz. \$13.50, postpaid \$13.90.

Felker's Insulated Duplex Fountain

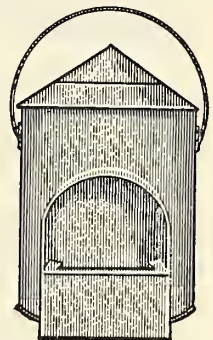
Top Section Slides into Bottom Section

Keeps Water Warm in Winter
Keeps Water Cool in Summer

Its construction makes it as handy to clean as a common pail. The top or inside container slides into the bottom section or base, and can be removed without inconvenience at a moment's notice. The water is kept pure and clear at all times.

The extra-large opening, or drinking-trough, makes this Fountain easy of access to a number of fowls at the same time.

An entirely new and improved method of insulation enables it to keep water at an even temperature the coldest day of winter and the hottest day of summer. It will not freeze.



	Each	Postpaid
3-gallon	\$4 50	\$4 85
4-gallon	5 00	5 40

BABY CHICKS

Get our prices before placing your order. All leading breeds from high-bred stock. Beginning early in March will furnish chicks until the end of the season late in June.

CEL-O-GLASS

The Unbreakable Material for Hotbed Sash, Coldframes, Poultry Houses, Garages, and Farm Buildings.

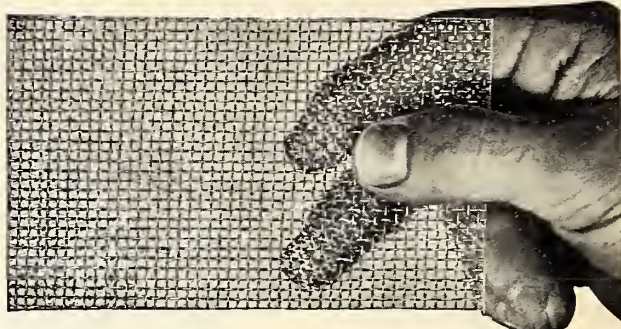
THE ONLY COMMERCIALY ACCESSIBLE MATERIAL THAT ADMITS THE ULTRA-VIOLET RAYS

CEL-O-GLASS is a light-weight, UNBREAKABLE material that admits light almost as freely as clear glass. It is hailproof, heatproof, coldproof, and weatherproof.

It lets through the health-giving ultra-violet rays of the sun which are so valuable in poultry-raising. Glass absorbs these rays and does not let them pass.

When used for poultry-house fronts and lights, laying-houses, colony houses, and brooders, CEL-O-GLASS makes chicks grow faster and lay more eggs and prevents "weak legs."

Anyone can put up CEL-O-GLASS. Hammer, tacks, and an ordinary pair of shears are the only tools needed.



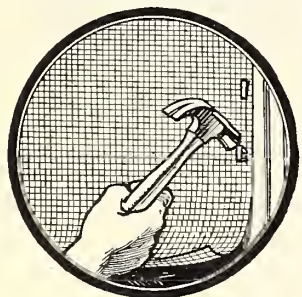
CEL-O-GLASS is made of coarse mesh galvanized wire cloth treated in such a manner that the spaces between the strands are filled with a clear, transparent, tough, flexible substance that will not rub off, peel or become brittle.

CEL-O-GLASS has been thoroughly tested in use during severe hail storms, and has demonstrated beyond a doubt its capacity to resist storms that would ruin ordinary glass construction. Artificial tests have also been made, with remarkable success.

Write for Sample and Booklet FREE

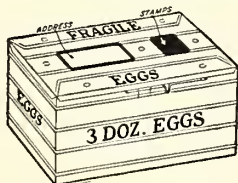
In rolls 3 feet wide	Postpaid	Small quantities	Postpaid
100-foot Roll, 300 square feet. \$48 00	\$48 50	10 lineal feet, 30 square feet.....	\$5 20 \$5 35
50-foot Roll, 150 square feet..	24 50 24 80	5 lineal feet, 15 square feet.....	2 75 2 85
25-foot Roll, 75 square feet..	12 50 12 70		

CEL-O-MEND. For repairing punctures in CEL-O-GLASS. ½pt. 50 cts., postpaid 60 cts.; pt. 75 cts., postpaid 85 cts.



The Ellis Aluminized Metal Egg Crates

This is the New Model with the metal edged filler and it is a wonder. Solves every problem of shipping eggs and butter and other soft products by mail. Built for continued use; practically indestructible; lasts for years. No wrapping is required. A permanent lock pin that does not lose, holds the lid rigidly closed.

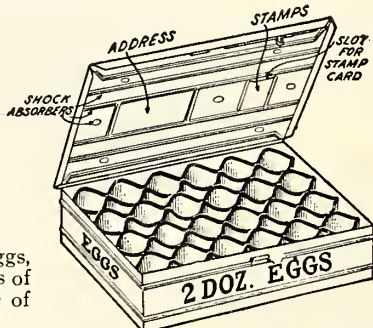


Reversible Address Cards

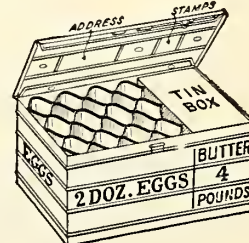
Reversible address cards are placed over eggs, address visible through opening in lid. Names of shipper and receiver are placed on each side of this card.

Metal Edge Filler

This is a wonder—so strongly made that it will not require replacements. Every user praises the New Model, with the Metal Edge Filler. Nothing better can be made to stand the jar and shocks in transit.



Metal Edge Filler



Combination Crates

Any size Combination Crate desired can be supplied to carry eggs, with metal containers to hold butter, lard, sausage, honey, cut-up chicken, country sliced ham, etc. Any of these Combination Crates will be found surprisingly satisfactory. Butter, lard, and other soft products will not melt or run in warmest weather.

EGGS ONLY		Postpaid
1½-do. size, all eggs.....	\$1 25	\$1 34
2-do. size, all eggs.....	1 50	1 59
3-do. size, all eggs.....	1 75	1 85
4-do. size, all eggs.....	2 00	2 11
6-do. size, all eggs.....	2 50	2 62
9-do. size, all eggs.....	3 25	3 39
12-do. size, all eggs.....	4 00	4 16
EGGS AND BUTTER		
No. 1. 2 lbs. and 1 doz. eggs.	1 50	1 59
No. 2. 4 lbs. and 2 doz. eggs.	2 00	2 10
No. 3. 4 lbs. and 3 doz. eggs.	2 25	2 36
BUTTER ONLY		
No. 4. 6 lbs. (3 2-lb. cont.).	2 25	2 34
No. 5. 12 lbs. (3 4-lb. cont.).	2 50	2 60
No. 6. 16 lbs. (2 8-lb. cont.).	2 50	2 60
No. 7. 24 lbs. (2 12-lb. cont.).	3 50	3 62

MAILING RATES

	Weight Empty	Postage Empty	Postage Filled
1½-do. size.....	3 lbs.....	\$0 09	\$0 11
2-do. size.....	3 lbs.....	09	12
3-do. size.....	4 lbs.....	10	14
4-do. size.....	5 lbs.....	11	17
6-do. size.....	6 lbs.....	12	21
9-do. size.....	8 lbs.....	14	28
12-do. size.....	10 lbs.....	16	34
Comb. No. 1.....	3 lbs.....	09	12
Comb. No. 2.....	4 lbs.....	10	17
Comb. No. 3.....	5 lbs.....	11	20

The above postage rates apply to the second zone or 150 miles

Improved "Surety Cushion" Wooden Egg-Cases

Nothing like them, nothing just as good for parcel post and express shipments. Made in all sizes to hold from two dozen to thirty dozen eggs.



Patented

Light, yet strong, they are sure to carry safely, regardless of the distance. Easier and quicker to pack than the ordinary returnable cases. Will stand up under the most severe tests and pay for themselves in two or three shipments by eliminating breakage. Many successful poultrymen throughout the country are using them.

The Improved "Surety Cushion" Egg-Case is constructed of the best of planed lumber. The ends are reinforced with strips of wood fastened just above the grooved handles so as to prevent the sides from loosening. The double-jointed link hinges, riveted on the inside, allow the cover to turn back without breaking off. It also has a snap catch lock and a small hole cut in the cover and side for sealing with a wire seal.

The Improved "Surety Cushion" Cases are no heavier or larger than the ordinary returnable cases. The cost of shipping is reduced considerably by the saving in weight and bulk occasioned by the use of our improved reversible pyramid pocket trays. These trays hold each egg in a double pyramid cushion pocket, which prevents the eggs from coming in contact with one another, and also from rattling about.

The cases are also ideal for storing eggs for hatching, as the eggs may be turned from day to day merely by the turn of the case. This may be done without fear of breakage, even when the cases are only partly filled.

Empty cases may be returned to the shipper for 15 cents apiece for any distance. Ask your local express office for further particulars.

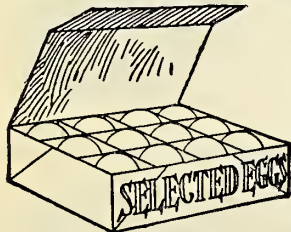
The "Surety" Trays may be used repeatedly and usually last as long as the cases, but if by chance they are broken, extra trays may be purchased separately.

Ready for immediate use when delivered.

PRICES AND AVERAGE WEIGHT

	Each	Postpaid
2-dozen size.... 5 1/4 lbs.....	\$1 45	\$1 60
4-dozen size.... 7 3/4 lbs.....	1 90	2 05
5-dozen size.... 8 3/8 lbs.....	2 00	2 15
6-dozen size.... 8 7/8 lbs.....	2 10	2 25
8-dozen size.... 10 1/8 lbs.....	2 35	2 55
10-dozen size.... 10 3/4 lbs.....	2 60	2 80
12-dozen size.... 12 1/2 lbs.....	2 85	3 05
15-dozen size.... 14 lbs.....	3 25	3 50
30-dozen size.... 25 lbs.....	4 75	

Extra trays, 12-egg size (for 2-dozen size cases) \$3.50 per 50 sets of two trays each. Extra trays 24-25-egg size (for 4-, 6-, 8-, and 12-dozen size cases), \$6 per 50 trays. 30-egg size (for 5-, 10-, 15-, and 30-dozen size cases), \$7 per 50 trays.



Folding Egg Boxes

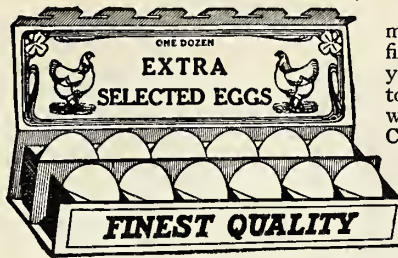
One-dozen size. No printing

This is the regulation Folding Egg Carton, used where eggs are delivered direct to customers. It is not a parcel post box. They are also used as fillers for The Successful Handy Egg Crate.

PRICES

	Postpaid	Each	Postpaid
12 Boxes.....\$0 25	\$0 30	250 Boxes.....\$2 50	\$2 85
50 Boxes.....70	80	500 Boxes.....4 25	4 95
100 Boxes.....1 25	1 50	1000 Boxes.....7 50	

Self-Locking Carton



It is good business to market your fine eggs in first-class Egg Cartons and your service to your customers is not complete without Self-Locking Egg Cartons—the Quality Cartons of patented construction, which bring out the merits of your eggs to the fullest advantage.

The very best prices for your good eggs and Self-Locking Cartons form the right combination.

Special Features

Quick, easy set-up.

Patented self-locking cover—no further wrapping or tying with string and no seals required, although seals may be used, affording double protection.

Cartons are ventilated, allowing free circulation of air through the box and around each egg, an important factor in assuring the eggs reaching your customers without deterioration in quality.

Pack 30 dozen to the regulation egg-case—also suitable for use with Humpty Dumpty crates for express or parcel post shipment. Assures delivery without breakage loss. Your customers cannot but be pleased with the appearance of the eggs in the cartons. You will clinch the good will of your trade.

Read one of the many letters from users of Self-Locking Cartons: "Replying to your letter of recent date, wish to state that we have found the Self-Locking Carton to be very satisfactory. It's attractive and helps sell the eggs."

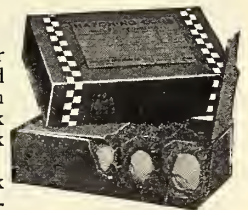
"I have no improvements to suggest as I believe that you have the most complete and best Carton that it is possible to make."

12 Boxes.....\$0 40	Postpaid \$0 45	250 Boxes.....\$4 50
50 Boxes.....1 30	1 40	500 Boxes.....8 75
100 Boxes.....2 25	2 50	1000 Boxes.....16 50

"HatchanEgg" Box

This box is so constructed with filler inserted, that it will resist crushing and blows received when in transit much better than a one-piece box or a box without a filler, such as the average box now on the market.

The Anderson "HatchanEgg" Box is designed particularly for transportation of valuable eggs for hatching. The maximum of safety is assured. "HatchanEgg" boxes are printed in two colors with forwarding and shipper's address lines.



Safe and Sure

PRICES

	Each	Postpaid	Doz.	Postpaid
No. 3. Holds 15 Eggs.....	\$0 35	\$0 40	\$3 75	\$4 10
No. 4. Holds 30 Eggs.....	45	50	4 90	5 30
No. 5. Holds 50 Eggs.....	60	65	6 50	7 00



Master Breeders' Chick Box

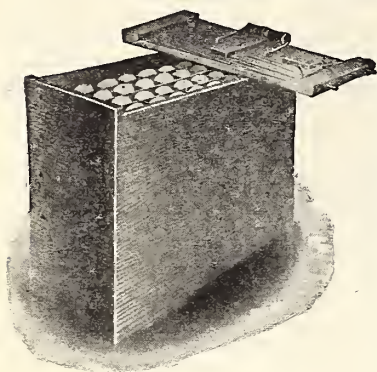
A safe and convenient carrier for shipping baby chicks either by express or parcel post. Made according to Association standards and are full 5 1/2 inches in depth. Covers are neatly printed in two colors.

	Each	Postpaid	Doz.	Postpaid
25-Chick size. 11 x 9 x 5 1/2 in...	\$0 20	\$0 25	\$1 50	\$1 75
50-Chick size. 18 x 11 x 5 1/2 in...	25	35	2 00	2 30
100-Chick size. 22 x 18 x 5 1/2 in...	35	40	3 00	

Special prices on 10-doz. lots on request.

Successful Handy Egg-Crate

"JUST LIKE A SUIT-CASE"



Made of galvanized iron, except the cover—will last a lifetime. Light in weight; size, 17 inches long, 8 inches wide and 13 inches deep. Holds 15 dozen eggs; has adjustable top that fits into crate any depth desired. This feature is very desirable because you can pack 1 dozen eggs as well as 15 dozen, and prevent them from rolling around and breaking—adjustable top holds them in place no matter whether the crate is one-fourth, one-half or entirely full.

Particularly handy for those who go to market in a buggy, because the Crate is small enough to set in the bed back of the seat or in front and leave plenty of room for the feet. The regulation Folding Egg-Boxes shown on page 187 are used as fillers for this Crate.

Crate Complete, with Fillers \$2.25, postpaid \$2.50

Humpty Dumpty

The best, cheapest and most convenient egg-carrier in existence

Equipped with Safety Cushion Flats which practically eliminate breakage. No tool needed to set up these strong and durable carriers—no bothersome work in packing, and can be used over and over again.

They are packed in bundles, complete with fillers.

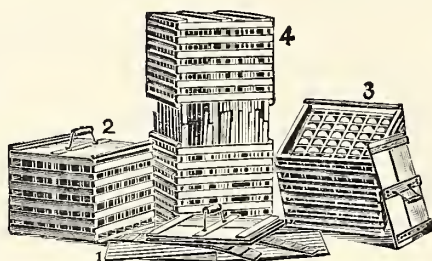


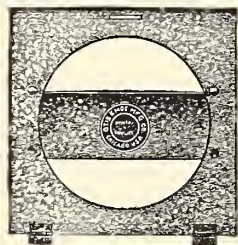
Fig. 1, folded flat; Fig. 2, set up closed; Fig. 3, set up open; Fig. 4, shows half dozen complete, ready for shipment.

PRICES

	Each	Postpaid
3-dozen size.....	\$0 45	\$0 55
6-dozen size.....	50	60
12-dozen size.....	60	70
15-dozen size.....	70	85

Extra Fillers, 5 cts. each, 50 cts. per doz.; postpaid 55 cts. Case containing 120 three-dozen size fillers and 144 flats \$4.

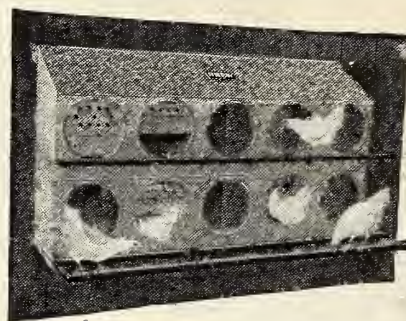
Moe's Trap-Nest Front



This new, inexpensive and useful device meets a popular demand, and has proved a wonderful seller. It places Trap Nests within the reach of all, for with its use an old orange-box can be converted into a double trap nest at a cost of a dollar. They are simple in operation with no small parts to get out of order. The front works on hinges, making it easy to remove the birds or clean the nest. They also give the breeder the opportunity of using the size nest best adapted to his birds with a uniform trap feature suitable for any breed. Manufactured from galvanized iron, 11 inches wide, 12 inches high.

No. 63, complete, 50 cts. each, \$5.50 per doz.; postpaid, 60 cts. each, \$5.75 per doz.

Drew All-Metal, Lice-Free Nests



Drew Nests are neat, pleasing in appearance, sanitary, and comfortable. Built of first-grade, copper-bearing galvanized steel sheets, they are quality Nests that will withstand hardest service for many years.

The Nest-boxes are 11½ inches wide and 13 inches deep, with a 9¼-inch nest-hole, sufficiently large for average flocks.

To clean Nest, swing the section out from the wall and the old nesting material will drop out. The all-steel construction eliminates harboring-places for lice and mites. All Nests are designed to suspend from the wall. Shipped knocked down; easily assembled.

DB-823 All-Metal Nests. 3-hole section. Weight 25 lbs....\$5 25

DB-826 All-Metal Nests. 6-hole Double Tier section.

Weight 35 lbs..... 7 85

DB-830 All-Metal Nests. 10-hole Double Tier section.

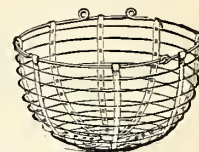
Weight 55 lbs.....10 85

DB-811 Trap attachment, as shown in cut, extra, each.... 45

Wire Hens' Nests

Made of coppered steel wire, with flat steel ribs, and heavy top wire, all copper finish.

Provides a clean, sanitary nest for the setting hen. Easily kept free from vermin. Intended to fasten to wall with nails or screw-hooks. Can be readily changed and filled with fresh straw or hay.



No.	Size	Each	Postpaid	Doz.	Postpaid
No. 300.	12 in. x 6½ in.....	\$0 20	\$0 30	\$2 20	\$2 40
No. 301.	14 in. x 7 in.....	25	35	2 75	3 00



Clay Pigeon Nest

Unglazed

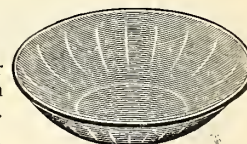
9-in. diameter, each 30 cts., doz. \$3. By Express or Freight.

Moe's Pigeon Nests

Made of galvanized iron. Diameter 8 inches, with a small hole punched in center so it can be tacked to a board. Generally used in pairs.

Light in weight, yet substantial, and easily cleaned.

No. 107. Pigeon Nests, 15 cts. each, postpaid 20 cts.; \$1.60 per doz.; postpaid \$1.75.



Our Nursery Department

See pages 49 to 58

We furnish high grade stock of *Roses*, *Climbing Vines*, *Hardy Perennials*, *Perennial Phlox*, *Peonies*, and *Shrubs*. All of our stock is No. 1 grade and will be delivered to our customers in the best possible condition.

Master Breeders' Shipping Coop



The Master Breeders' Shipping Coop is a strong light Coop made in three parts. The top and bottom are made of wood and the body is composed of corrugated paper in the form of a tube. The bottom is composed of a frame on which the boards are nailed solid, tongued and grooved, so as to avoid cracks and loss of grain. The top is composed of a wooden frame

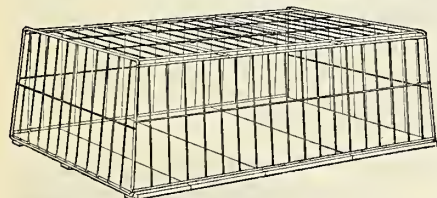
with slats running across. This strong construction enables the Coop to resist hard knocks, making it practical in every way. Ventilation is supplied through the top as the wooden slats are placed from 1 to 2 inches apart. The large holes cut in the ends and used for a grip when picking up the Coop, help to ventilate as well.

PRICES (Knocked Down)

No.	Inches	Each	No.	Inches	Each
B	21 x 12 x 22 deep	\$0 90	D	21 x 24 x 22 deep	\$1 15
C	21 x 18 x 22	1 00			

The Pittsburgh Shipping Coop

The most serviceable, sanitary, and durable Shipping Coop on the market. Made of the best galvanized steel bars and wire



electrically welded together and sufficiently stayed to make it rigid throughout. The bottom is made of the best seasoned wood and is assembled by the floor-boards being

stapled to three cross sections and reinforced with cleats on top.
Standard Size. 27 x 41 x 14 inches high.....\$3 25
Turkey Size. 27 x 41 x 20 inches high..... 4 25
ASK FOR PRICES ON OTHER SIZES AND LARGER QUANTITIES

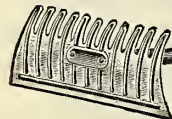
Mehler Handy Scraper



For cleaning poultry-houses and dropping-boards; gets the corners. Time is money; be

progressive; save by using Mehler Scraper. Does the work better in one-third the time, and soon pays for itself. Scrapes on the push or pull. 13 inches wide, 4 inches high. Price, \$1.25; postpaid, \$1.50.

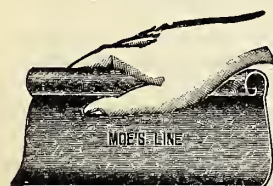
Moe's Handled Scraper



Made of hard, stiff steel. Light in weight, yet strong and durable. The toothed or rake edge is excellent for cleaning sand or sifted ashes on drop boards. Length of blade 9½ inches; width 4 inches; with 30-inch hardwood handle securely riveted to the blade.

No. 51. Handled Scraper, 45 cts. each; postpaid 55 cts.

Moe's Scraper and Cleaner

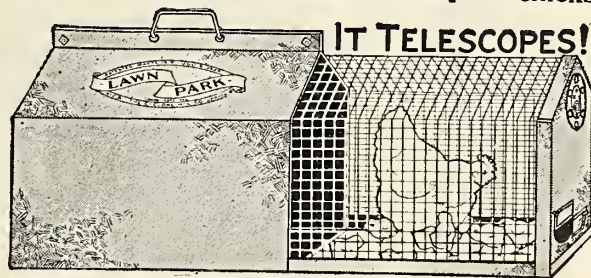


Made of one piece of galvanized iron. No wood handle to get loose and come off. Just the thing to get in the corners when cleaning. 10 inches long. Price 20 cts.; postpaid, 25 cts.

The LAWN PARK Brood Coop

SAVES THE CHICKS

IT TELESCOPES!



Patented May 13, 1919

It is made entirely of galvanized materials, will not rust, and absolutely protects chicks against rats, cats, dogs, hawks, vermin, cold, storms, and all other chick enemies. The metal actually repels lice—that's important. The main part of the Coop is made from heavy galvanized steel, while the Park is made from strong galvanized wire screen, which has the edges neatly bound and strongly reinforced with galvanized steel. The Lawn Park is large and roomy, being 18 inches wide, 19½ inches high, and 48 inches long, with Park extended. The Coop and the Park are of equal length. The Park permits the chicks to have plenty of sunshine and fresh air, and also allows them to range on grass. Can be moved from place to place easily, thus giving them a fresh supply daily. Coop has removable bottom for quick and easy cleaning. The overhead damper ventilation system keeps the Coop cool without chilling the chicks. The chicks saved on one brood will pay for one or more Coops. Price \$3.75.

The BABIE Chick-Feeder (PATENTED)

Made of best grade galvanized materials, it is rust-proof and will last a lifetime. Very strong and durable, the ends being made of solid sheet steel to which is securely fastened the galvanized wire screen which is strongly bound on the edges with galvanized steel. Has patent



door arrangement which permits the little chicks to enter but prevents the mother hen and older fowls from going inside. Will readily accommodate thirty to forty chicks at once. Can be placed anywhere or moved from place to place easily. The feed is dropped through the top and the little chicks can eat and drink in contentment without being crowded or trampled by older fowls. It is so designed that it can be placed in front of the Lawn Park Coop and securely fastened to make an additional runway of 2 feet, or it can be used in connection with any brood coop, as the door of the feeder is so made that it will fit practically any brood coop, thus supplying a yard to the ordinary closed coop. Size 6 inches high, 18 inches wide, and 24 inches long. Saves feed and chicks. Price \$1.25; postpaid \$1.50.

The Lyon Roost Insulator



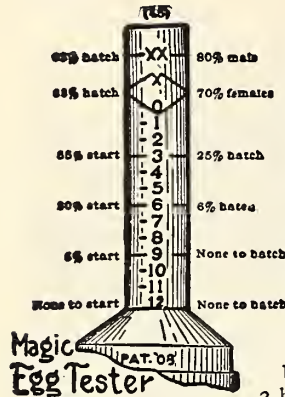
Its application is best explained as follows: An upright support, perhaps 1½ or 2 inches square and of any desirable height, is used for each end of roosts. Holes are bored in at the top of these supports large enough to allow the Insulator to fit tight and deep enough to allow bottom of Insulator bell to rest on square top of upright.

The roost-pole is then bored to fit tight on top of Insulator and deep enough to allow it to rest on the small shoulder provided for that purpose.

The bell-shaped cup is then kept partially filled with kerosene oil which either traps and destroys the vermin or turns them back in their travels up the supports towards the roost.

	Postpaid
One Pair.....	\$0 35
Six Pairs.....	1 45

1910—Breeders' Magic Egg-Tester—1926



Magic Egg Tester

Moe's Egg-Tester

Used with an ordinary lamp (No. 2 burner) in a dark room.

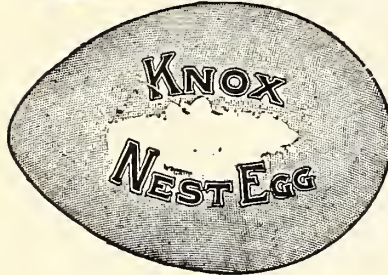
It will illuminate the interior of the egg, and show if the chick is alive, and also show the size of air-cell in the egg.

No. 48. Moe's Egg-Tester. 25 cts. each; postpaid 35 cts.

Knox Nest-Egg

A naphthalene egg that will keep the nest clean and pure.

They are also used as nest-eggs, but care should be taken not to let them come in contact with the eggs for any length of time, as the hen's eggs will become tainted. For this reason we recommend that they be put under the nesting material. Price, 7 cts. each; 4 for 25 cts. (postpaid 30 cts.); 65 cts. per doz. (postpaid 75 cts.).

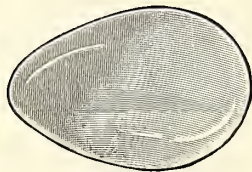


Glass Nest-Egg

Natural in appearance and uniform in size. Will not easily break.

They induce the hen to lay where she should—in the nests provided for her.

Very popular, and the cleanest nest-egg used. Price, 3 for 10 cts.; 30 cts. per doz.; postpaid, 40 cts. per doz.



Petty's Perfect Poultry-Punch

One of the best punches on the market. All steel, nickel plated, punches clean, hole is right size, will not bruise the foot. Price 25 cts., postpaid.



Moe's Ideal Poultry-Punch

An improved Punch, scissors type. Works easily, cuts cleanly, and does not pinch the foot.



Convenient to carry in vest-pocket and the lower end is an excellent cigar cutter. Nickel-plated finish. Length 3½ inches. No. 39. Ideal Punch Each 50 cts.; postpaid 55 cts.

BABY CHICKS

Get our prices before placing your order. All leading breeds from high-bred stock. Beginning early in March will furnish chicks until the end of the season late in June.

The cut to the left shows the Tester minus the fine wire clamps which are attached to the bottom for holding the egg, and which, together with the Tester, are dropped in a pail of water. The water-line shows the exact grade. Eggs testing "o" or above are used for incubation. For example, eggs testing from "o" to "x" hatch to the extent of 88 per cent, and 70 per cent of the chicks will be females.

The Magic Egg-Tester has revealed the true cause of infertile eggs, and the subject is made clear and plain in a bulletin included with the Tester. The poultryman who is interested must look to our bulletins sent out with every Tester for further uses of the Magic Egg-Tester, as limited space will not permit discussing them herein. The various merits of this Tester have been told monthly in every prominent Poultry Journal in the United States and Canada continuously for the past ten years, and demonstrated hundreds of times in Poultry shows from Maine to California. Simple in construction—will last a life-time. The use of water is beneficial rather than harmful to the eggs. This Tester requires no skill or expense to operate—just a pair of hands and eyes. Will grade 400 per hour, and the greatest money-saver in the realm of poultry supplies. Fully guaranteed. \$2.50 each, postpaid.

Caponizers

Large profits await the raiser of capons. Pilling's instruments are the acknowledged leaders in this line.



New Philadelphia Caponizing Set

This set has many admirers.

It consists of a knife, for making the incision; the spreader, for holding sides open; sharp hook, for piercing skin; the Lansdowne Remover, for removing the testicles. Cords with hooks are for holding the bird. Cup forceps for removing any foreign matter. They are fine instruments of the best workmanship. Prices (postpaid), in velvet-lined case \$2.75; in pasteboard box \$2.50.

Pilling Special Caponizing Set

The finest set in the world for the price. It is used just the same as other Caponizing Sets, except that the Testicle Remover cuts, like a pair of scissors, the cord of the testicle clean and clear as a whistle. The instruments in this set are put up in oak case sent postpaid with full, easy-to-use directions on receipt of \$4, postpaid.



Cornell Caponizing Set

Experiments in the use of various caponizing instruments recently carried on by E. W. Benjamin, Instructor of the Department of Poultry Husbandry at Cornell University, have resulted in the manufacture by us of the Cornell Caponizing Set.

This set—two testicle removers, Pilling-Farmer twisting scoop, and Pilling-Miles remover—sells for the reasonable price of \$5, postpaid.



Lansdowne Caponizing Set

Lansdowne Automatic Testicle Remover is, as its name implies, automatic—quick, easy to use, and just the remover for the beginner.

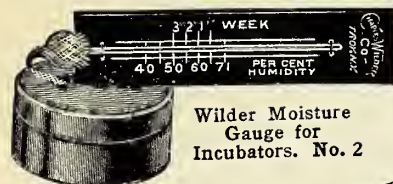
Does not have a lot of unnecessary springs which are liable to get out of order. The grasping loops are exactly same principle as the Miles Remover, which has been in use for fifty years, but our patent feature has made it perfect as to simplicity of the operation and to prevent making slips. Price \$3, postpaid.

Incubator and Brooder Extras

	Each	Postpaid
No. 1 Lamp Bowl.....	\$0 90	\$1 00
No. 2 Lamp Bowl.....	1 25	1 35
No. 3 Lamp Bowl.....	1 50	1 60
No. 1 Sun Hinge Burner. Uses 1/2-inch wick.....	50	55
No. 2 Sun Hinge Burner. Uses 1-inch wick.....	75	80
No. 3 Sun Hinge Burner. Uses 1 1/2-inch wick.....	1 00	1 05
Chimneys.....	50	55
Nos. 1 and 2 Wicks. Dozen.....		30
No. 3 Wicks. Dozen.....		40
Argand Gas Burner, for incubators and lamp-heated brooders.....	75	85
Lamp Bowl for Buckeye Standard Incubators....	1 00	1 10
Lamp Bowl for Buckeye Style E Incubators.....	1 00	1 10
Lamp Burner for Nos. 1 and 2 Buckeye Incubators.	75	80
Lamp Burner for Nos. 3, 4, and 5 Buckeye Incubators.....	1 00	1 05
Lamp Burner for Nos. 14 and 16 Buckeye Incubators.....	75	80
Lamp Burner for No. 17 Buckeye Incubator.....	1 00	1 05
Lamp Chimney for Buckeye Standard Incubators	50	55
Lamp Chimney for Buckeye Style E Incubators..	50	55
Gas Burner for Buckeye Style E Incubators.....	2 00	2 15
Wafers for Wafer Regulator, 3-in.....	60	65
Wafers for Wafer Regulator, 5-in.....	1 25	1 30
Wick for No. 27 Buckeye Blue Flame Brooder...	40	45
Wick for No. 28 and No. 29 Buckeye Blue Flame Brooder.....	65	70
Lighting Rings for Reliable Brooder. 4 for 50 cts..		60

Wilder Accurate Thermometers and Hygrometers

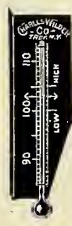
FOR INCUBATORS AND BROODERS. YOU CAN DEPEND UPON THEIR LASTING ACCURACY



Wilder Moisture Gauge for Incubators. No. 2



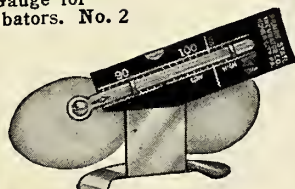
1110



1062



1046



1062, Mounted



1052



1116



1122

	Each	Postpaid
No. 1046. Buckeye Incubator Thermometer....	\$0 75	\$0 80
Buckeye Universal Thermometer.....	1 00	1 10
No. 1052. Cypher's Incubator Thermometer....	75	80
No. 1062. Prairie State Incubator Thermometer, mounted.....	90	95
No. 1110. 5-inch Brooder Thermometer (fits any Brooder).....	50	55
No. 1116. Brooder Thermometer.....	75	80
No. 1122. Brooder Thermometer.....	75	80
No. 2. Wilder Moisture Gauge.....	1 15	1 25
No. 5796. Tycos Incubator Hygrometer (no illus).		1 75

Poultry Judges' Sticks

	Telescopic	Each	Postpaid
Small.....		\$0 90	\$1 00
Medium.....		1 25	1 35
Large.....		1 75	1 85

- A Shows Large Stick closed.
B Shows Large Stick opened.
C Shows Medium Stick opened.
D Shows Small Stick opened.

Perfecto Spiral Leg-Bands

KNOW YOUR HENS ON SIGHT



Spiral Leg-Band

In ten colors—Red, Green, Amber, Black, White, Pink, Yellow, Ruby, Light Blue, and Dark Blue. For large and small birds, chicks, and pigeons.

Mark each bird for its pen. Give each pen a different color. Mark old birds and pullets differently and know what you are doing.

Perfecto Bands have extra-long lap, making them strong and securing them from coming off.

SIZES

- No. 1. 7/8-in. diam. for Asiatic Breeds.
No. 2. 3/4-in. diam. for American Breeds.
No. 3. 1 1/8-in. diam. for Leghorns, etc.
No. 4. 1 1/2-in. diam. for Bantams.
No. 5. 1 3/4-in. diam. for Pigeons.
No. 6. 1 1/2-in. diam. for Baby Chicks.

Nos. 1, 2, 3, and 4	Postpaid	Nos. 5 and 6	Postpaid
12 bands.....	\$0 15	12 bands.....	\$0 10
25 bands.....	30	25 bands.....	20
50 bands.....	50	50 bands.....	35
100 bands.....	75	100 bands.....	50
500 bands.....	3 60	500 bands.....	2 25

In Ordering Be Sure to Specify Number and Breed

Colored Leader Adjustable Leg-Bands



For a general purpose band that provides quick and accurate identification, this Colored Leader cannot be equaled. It will fit anything from Bantam to Cochon, or Tom Turkey or Goose. Light in weight, but of sturdy design and construction. Continuous line of color around the band so that a bird can be distinguished, so far as brood or pen is concerned, from a distance.

A "Crackerjack" for trap nesting. Furnished in Red, Blue, Green, White, Yellow, or Pink. Not numbered above 200.

PRICES (Postpaid)

12 Bands....\$0 30	50 Bands...\$1 00	500 Bands...\$6 50
25 Bands.... 60	100 Bands... 1 50	1,000 Bands..12 50

Seamless Leg-Bands (Pigeon Sizes Only)

Our Seamless Pigeon-Bands are made of pure aluminum, well finished up, and will give satisfaction. Made in three sizes, Nos. 1, 2, and 3.

PRICES (Postpaid)

12 Bands....\$0 30	50 Bands...\$1 00	500 Bands...\$6 50
25 Bands.... 60	100 Bands... 1 50	1,000 Bands..12 50

Double Clinch Pigeon Bands



DOUBLE CLINCH LEG BANDS PIGEON SIZES

PRICES (Postpaid)

12 Bands....\$0 20	50 Bands...\$0 45	500 Bands...\$3 50
25 Bands.... 25	100 Bands... 75	1,000 Bands.. 6 50

Moe's Aluminum Leg Bands



Made of sheet aluminum, with large raised numbers, easy to read from a distance. Adjustable for any size fowl. Accurately made and quickly applied. Packed in paper cartons of 12, 25, 50 and 100 bands each. Numbered from 1 to 999. Prices, postpaid.

No. 130—Adjustable Aluminum Leg Bands

12 bands	\$0 15	100 bands	\$0 75
25 bands	25	500 bands	3 50
50 bands	45	1,000 bands	6 00

The Acme Egg-Grading Scale

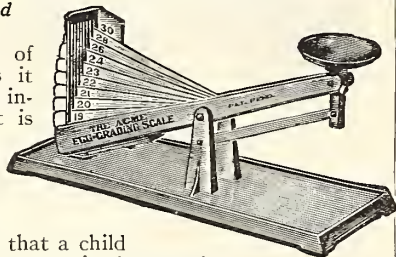
Graded Eggs Mean a Higher Market Value

Automatic, Accurate, and Convenient

It is made entirely of aluminum, which makes it rustproof and practically indestructible. Every part is accurately made, carefully tested, and will meet the requirements of any state bureau of weights and measures.

This Scale is so simple that a child can operate it. By placing an egg in the cup, the beam will automatically adjust itself. The lowest visible number on the blades will indicate the weight in ounces of one dozen like eggs.

Acme Egg-Grading Scales will accurately grade all eggs ranging from 19 ounces per dozen to 30 ounces per dozen. Price \$3; postpaid \$3.10.

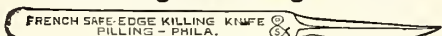


French Poultry-Killing Knife



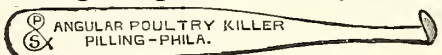
Price 50 cts., postpaid

Safe-Edge Killing Knife



Exactly same as French Killer except cut on one side only. Price 50 cts., postpaid.

Pilling Angular Poultry-Killer



Price 50 cts., postpaid

Philadelphia Gape-Worm Extractor



Price 30 cts., postpaid

Round Galvanized Iron Feed-Bins

These Feed-Bins are just the thing to keep your feed from rats and mice. They are 18 inches in diameter by 27 inches high and hold a 100-pound sack of feed. The lid can be used for filling the feed-hoppers. Price, \$3.75.

Get Rid of Your Rats

**Rat
Corn**



THIS IS A RAT MUMMIFIED

It is Sure Death to Rats and Mice. Rat Corn is not a deadly poison and therefore can be used without danger to human beings. Price per can, 25 cts., 50 cts. and \$1, postpaid.

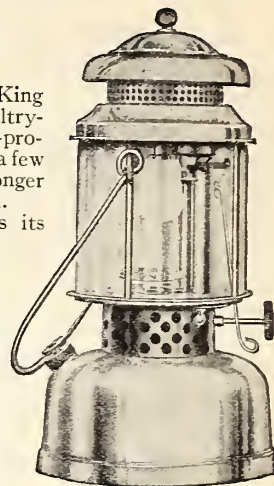
Storm King Lantern

400 CANDLE-POWER

Get more eggs by hanging a Storm King Lantern in your poultry-house. Poultrymen everywhere are increasing egg-production by using them in hen-houses a few hours each night and morning—longer feeding hours increase the egg-yield.

The Storm King makes and burns its own gas from common motor gasoline, giving more light than twenty oil lanterns and costing a little over a cent for three hours' use. Absolutely safe. Burns in any position and in any wind. No danger, even if tipped over. Tested by egg-producing authorities and has their unqualified approval.

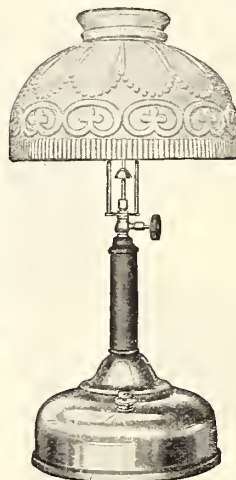
Capacity of fount, 1 quart—burns 12 to 15 hours on one filling. Height 13 inches, weight 4 pounds. Equipped with Mica Chimney, 1 No. 1A Rag Mantle, and all accessories. Shipping weight, 5 pounds. Price \$7.50, postpaid \$7.75.



"Nulite" Match-Lite Lamp

Lights quickly with a match. Just scratch a match and light it.

Brilliant, Economical, Convenient, Clear.



This is the most popular style of match-generating, match-lighting Lamp and is used extensively in home, office and store.

It is a faultless, flawless Lamp without wick, chimney, smoke, smell, grease, dirt, trouble or danger. It is twenty times as powerful as an ordinary wick coal-oil Lamp and will burn continuously for 15 hours on one filling, three pints of common motor gasoline.

Height 22 inches, weight 6 lbs., polished nickel plate finish, equipped with two No. 1B Rag Mantles, No. 110 white embossed shade, wrench tip cleaner, extra rubber washer and instructions.

Price \$9, postpaid \$9.25.

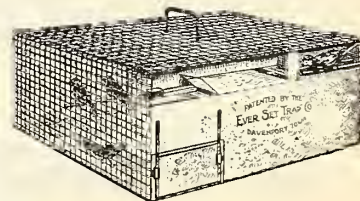
No. 110M. 400 Candle-Power

Ever-Set Sparrow Trap

Made of 5/8-inch galvanized hardware cloth. They have been fully tried out and have caught as high as 65 sparrows in one day in summer, and 40 in one day in winter in a single trap.

Size of trap 18 x 18 x 12 inches, with 3 x 5 x 18-inch receiving-cage (for drowning), with complete instructions.

To the Farmer and Poultryman. Fifty sparrows eat daily the equivalent of a quart of wheat. Very likely you have many more than 50 sparrows fattening on the high-priced feed that you intended for your poultry. An Ever-Set Sparrow Trap, in the month of June, 1919, caught 562 English sparrows in a back yard in the city of Davenport—1,529 in five months (June to October). How much feed would these 1,529 have stolen from your poultry-yard each day? Without stopping to figure it is clear that an Ever-Set Trap pays for itself in a very short time. Price \$4, postpaid \$4.25.





Conkey's

THE ORIGINAL

BUTTERMILK STARTING FEED

Feed It for Eight Weeks and Raise Every Chick You Hatch



What It Contains

Buttermilk, Corn Meal, Corn Feed Meal, Oatmeal, Wheat Middlings, Raw Bone, and Blood Flour.

Makes Chicks Husky

Conkey's is a ready-prepared feed containing all elements for perfect growth of young fowls. It puts vim and vigor into your baby chicks at a time when they need it most. It makes them strong and husky, so they can fight off the chick diseases which kill hatchlings so rapidly.

Conkey's gives your chicks buttermilk in a concentrated, sanitary form, not too much and not too little. Feed it dry. The lactic acid is just what is needed as an aid in the prevention of digestive and bowel troubles. With the buttermilk is a combination of clean, wholesome grains, balanced in just the right proportion to help the little fellows over the critical first EIGHT weeks and give them a good start toward healthy maturity.

Guaranteed Analysis

Protein, 14 per cent; Fat, 3 per cent; Fiber, 4 per cent; Nitrogen-Free Extract, 56 per cent; Carbohydrates, 60 per cent.

This starting mixture is high in nutrients and low in fiber, so the sensitive organs of the chicks are not overtaxed by digesting waste material of no food value. Avoid feeds high in fiber—they're dangerous.

How to Feed First Eight Weeks

Chicks should have pure drinking-water, with chill removed, and fine grit from the start, but no feed for 48 hours. Then give Conkey's Buttermilk Starting Feed. That's all the feed they'll need for the first EIGHT weeks; add greens the second week. During the fourth week, scatter Conkey's Chick Grains in the litter to induce exercise. After the eighth week begin gradually changing to Conkey's Growing Mash.

Conkey's Buttermilk Growing Mash

A Bone and Muscle Builder—Produces Layers and Broilers

Guaranteed Analysis

Protein, 18 per cent; Fat, 4 per cent; Fiber, 5 per cent; Nitrogen-Free Extract, 50 per cent; Carbohydrates, 55 per cent.



This mash takes the little fellows after they have had a good start and supplies the necessary materials for a strong frame and solid flesh. It contains no charcoal, grit, nor shell. You get what you pay for—all pure, clean food. Remember, you can't make something from nothing—bone- and muscle-building require the proper feed and plenty of it. In addition scatter in the litter Conkey's Growing Grains.

DON'T OVERLOOK CONKEY'S Y. O. ON PAGE 198

Conkey's Buttermilk Laying Mash

Get Winter Eggs in Abundance with this Perfectly Balanced Ration

Guaranteed Analysis

Protein, 20 per cent; Fat, 5 per cent; Fiber, 6 per cent; Nitrogen-Free Extract, 44 per cent; Carbohydrates, 50 per cent.

This feed is wholesome grain, buttermilk, meat, and bone in precisely the right proportion to keep your flock in prime condition and at the same time make readily available each component part of the egg. Remember, properly balanced feeding is the secret of large egg-production. If your hen hasn't exactly the ingredients required she simply won't lay. You can't beat this—it's a law of nature. Conkey's Buttermilk Laying Mash is the result of years of study and tests. The hens relish it and lay accordingly. With this mash give Conkey's Scratch Grains in deep litter, using about one-half as much Scratch Grain as mash.



Conkey's Poultry Scratch Grains

MILLED IN GRADED SIZES TO FIT SPECIAL FEEDING PERIODS

Conkey's Chick Grains

A specially prepared cracked grain feed to be fed to little chicks at the end of the third or fourth week in connection with Conkey's Buttermilk Starting Feed. Scatter in the litter so as to induce exercise and prevent toe-picking.

Conkey's Growing Grains

Made from cracked grains larger in size than chick grains and balanced more for growing stock. This should always be scattered in the litter for the growing birds so as to keep them good and busy, and is fed in connection with Conkey's Buttermilk Growing Mash.

Conkey's Scratch Grains

This is for all grown birds, containing the larger grains properly proportioned and scattered in the deep litter for general exercise. It is fed in connection with Buttermilk Laying Mash and rounds out a hen's daily ration.

Don't Break the Conkey Chain of Feeds

For Prices on Above Feeds See Our Monthly Poultry Feed Price-List Accompanying this Catalogue

Pratts

QUALITY POULTRY FEEDS

Pratts are the highest quality poultry feeds made in America. Backed by over fifty years experience with poultry, with every ingredient carefully selected and processed in the most modern poultry feed mill in the United States, they are scientifically and practically correct. Pratts feeds give results when others fail and are better than the best you ever used. There is a Pratt feed for every poultry need and every age of fowl. Start your birds on Pratts and follow the Pratt system if you want real success and profit.

Start your chicks on



Pratts Buttermilk Baby Chick Food

This original "baby food for baby chicks" has taken all the guess, worry, and loss out of raising baby chicks. It is life insurance for chicks. Millions of pounds are used annually by successful poultrymen all over the world. Use it for your chicks for the first month or six weeks and watch results. Chicks grow strong, uniform, vigorous and sturdy, and are free from leg weakness, pasting up, and digestive troubles.

Pratts is guaranteed to raise every livable chick. Equally good for young turkeys, guineas, ducks, pheasants, and game-birds. A perfect "baby food" for young fowls. In packages and 5-, 10-, 25-, 50-, and 100-lb. bags.

After the husky little fellows are about a month old, switch them to



Pratts Buttermilk Growing Mash

Made of the most wholesome ingredients, it supplies an abundance of every element needed for making bone, muscle, feathers and health. Insures vigor and quick, uniform growth. Feed Pratts Buttermilk Growing Mash and watch them grow. When they are matured give them



Pratts Buttermilk Laying Mash

the food that "makes eggs." Every ounce is real food that nourishes and keeps your hens laying and healthy. It is so appetizing the hens eat it greedily and the more they eat the more they lay. You fill the hopper and the hens will fill the nest. Fine for moulting hens and breeding stock. Most economical judged by eggs and profit. Pratts is a real "laying mash." There is none "just as good."



Pratts Scratch Feeds

are good clean feeds with no grit, dirt, charcoal, shell or other cheap or useless filler. There is a Pratt Scratch Feed to be used with every Pratt Buttermilk Mash, with which they form perfect balanced rations. Sweet, clean, honestly made feeds.

Pratts Chick Size Scratch Feed for Baby Chicks.

Pratts Intermediate Size Scratch Feed for growing and Laying Stock.

Pratts Large Size Scratch Feed for Laying Hens.



For Prices on Above Feeds See Our Monthly Poultry Feed Price-List Accompanying this Catalogue

Semi-Solid Buttermilk

A life-saver for chicks. A remedy for White Diarrhea. Promotes rapid, healthy growth. Hustles hens back to health and laying after epidemics of roup, chicken-pox, or cholera. Rids hens of worms. Unequaled as an egg-producer for pullets and hens. Semi-Solid is pasteurized condensed buttermilk. Has greater medicinal and food value than liquid or dried buttermilk because the patented process gives Semi-Solid the greatest lactic acid content of any form of buttermilk.

Three-Year-Old Birds Lay Like Pullets

Make your older hens show a profitable egg yield this year by feeding **Semi-Solid**. It always lengthens the productive life of every bird.

Arthur Brodeur, Berkeley, Cal., says: "For seven weeks I have been feeding my pen of fifteen three-year-old birds **Semi-Solid**. When I started they were laying an egg every other day for the whole pen. Now they average seven to nine eggs a day, although they have just finished moulting. They are healthier, heavier, smoother finished and better looking than ever before."

Best results are obtained by feeding **Semi-Solid Buttermilk** just as it comes in the package. No other animal protein is required when laying hens are fed **Semi-Solid** at rate of 5 lbs. for every 100 head.

Look for the **Semi-Solid** label. It assures not only the fullest feeding values, but also the full tonic and medicinal effect which have made **Semi-Solid** famous.

Semi-Solid Buttermilk comes in 1-gallon cans, 50-lb. pails, 100-lb. drums, and 500-lb. barrels.

F. P. C. Chick Manna

It is the pioneer in Special Prepared Chick Food, being brought on the market in 1884 when specially prepared chick feeds were unknown. Many imitations and substitutes have come on the



market since with great claims, but none have had the **thirty-four years of successful results as F. P. C. Chick Manna.**

It is unlike and distinctly different from other chick feeds and we know of no other to equal or compare with it.

It is specially prepared

for bringing the tender little creatures through the most critical period of their life by regulating and strengthening their fine and tender organs, and aiding in the prevention of these fatal attacks of dreaded bowel trouble and other chick ailments.

Every package guaranteed to give satisfaction or money back. For Prices see our Monthly Poultry Feed Price-List.

Miscellaneous Seeds and Grains

Cracked Corn
Whole Corn
Pigeon Corn
Cracked Wheat
Pinhead Oatmeal
Hulled Oats
Sunflower Seed

Hemp Seed
Canary Seed
Rape Seed
Kaffir Corn
Pigeon Peas
Whole Flaxseed
Flaxseed Meal

Barley
Wheat
Buckwheat
Millet
Vetches
Oil-Meal
Gluten Meal

Our stocks of the above are carefully selected and will be found equal to any on the market.

"Chamberlain's Perfect" Chick Starter and Developing Feed with Buttermilk, Cod-Liver Oil, Animal Proteins



It is a wheat and oatmeal basis food, having ground meat, bone, charcoal and all other essential ingredients. No corn—made right—no bowel trouble.

The One and Only Starting and Developing Food

Complete in One Sack

This original and scientifically correct starting food is the only dry, granular baby chick food with animal proteins, buttermilk, and cod liver oil—all complete in one sack.

The miracle of health-building and disease-prevention by direct sunlight is rivaled by the correct use of chemically pure cod liver oil in combination with the finest known sources of all other needed minerals, proteins, vitamins, and related elements that make chicks thrive, even when confined indoors out of direct sunlight, and without green feed. Exceptional freedom from leg weakness and bowel trouble follows its use everywhere. Science in this starting food has brought in a new day of poultry raising economy, convenience, and satisfaction.

Spratt's Chick Meal Nos. 3, 5, and 12

(A Cooked Food)

No. 3 Coarse; No. 5 Medium; No. 12 Fine

Is prepared strictly according to modern scientific methods and is the result of careful and exhaustive experiments.

It has been demonstrated and is admitted by all experts that to rear birds successfully and bring them to the highest state of perfection they must have, while very young, a cooked food, and their corn diet must be carefully limited. This food should be composed of cereals, meat, vegetable, bone, and shell in judicious combination. Such is Spratt's Patent Chick Meal.

The price of our food seems high, but a trial will prove that it is the cheapest and most economical that can be used.

No. 3 is used as a conditioner for the show-room and has no equal for that purpose.





Darling's High Protein Meat Scraps

Made from clean, fresh trimmings from butcher shops, thoroughly cooked. After the cooking, every possible bit of water and grease is extracted in tremendous presses, and the solid cakes of meat are evenly broken up by special machinery. It contains more digestible protein, and less fat, moisture and waste, than any other brand of meat scraps or so-called beef scraps.

ANALYSIS

Protein.....50 per cent
Fat (minimum).... $\frac{1}{2}$ of 1 per cent
Fiber (maximum).....3 per cent

Furnished in two grades, regular and fine.

Greene's Fish Scraps

There is an ever-increasing demand for Fish Scraps for poultry feeding, as they have been proved a great egg-producer, and poultry are very fond of them. They are used extensively as the animal matter in the leading dry mashes on the market today. Poultry seem to eat a mash with Fish Scrap more readily than one containing beef scrap. They are made from fish meat and bone and run from 40 to 60 per cent protein and 3 to 5 per cent fat.

Dried Buttermilk

It contains everything found in the Whole Milk and Whole Milk is universally recognized as the best food for man or animal.

It is 100 per cent digestible. It contains no fiber. Every ounce of it is utilized in maintaining and building animal tissue, as it contains the most valuable constituents of all foods.

Remember the advantages of Dried Buttermilk.

1,100 pounds Wet Buttermilk reduced to one bag of 100 pounds

Easy to handle, will keep indefinitely, the last pound is as good as the first.

Chamberlain's Perfect Bird Food

WITH VEGETABLE AND EGG FLAKES

An Improved Scientific Food for Canaries

Birds properly fed do not need a song restorer.

Give your bird a treat and let him be the judge.

Contains a large variety of thoroughly cleaned, choice, sound and sweet imported and domestic seeds, each in just the correct proportions.

Every seed and every article has its own particular purpose and duty to perform, such as enhancing the brilliancy of the plumage, improving the song, keeping the bird healthy, bright and cheerful.

There is absolutely no waste in feeding.

Always fresh—sold only in damp-proof cans.

10-oz. can 25 cts., postpaid 30 cts.; 50-oz. can \$1, postpaid \$1.15.



Darling's Meat Crisps

A NEW MEAT RATION

Darling's Meat Crisps are manufactured from high-grade fresh meat-trimmings, carefully cooked, pressed, dried, and uniformly ground. The guaranteed analysis is: Protein, 75 per cent; fat, $\frac{1}{2}$ of 1 per cent; fiber, 3 per cent maximum. This gives you a protein content one and a half times that of common meat scraps; therefore, two pounds of this meat food equals three pounds of the ordinary meat scraps.

They are absolutely sanitary, and provide in concentrated form the elements that assure the highest fertility in the eggs and the most vigorous chicks. They supply the growing chick from the beginning with the elements of growth that it otherwise must go far and work hard to find.

They shorten the moulting period, mature pullets early, and keep the whole flock healthy.

Two Grades—Medium and Fine

Conkey's Pigeon Feed

A first-class mixture containing peas, Kaffir corn, wheat, buckwheat and millet.

ANALYSIS

Protein.....10 per cent
Fat..... $2\frac{1}{2}$ per cent
Fibre.....5 per cent

Alfalfa Meal—Coarse

Our Coarse Alfalfa Meal is preferred by some poultrymen to the fine ground sort. When wet freely it has the appearance and flavor of fresh cut grass and is eagerly eaten, stems and all, by the poultry.

Alfalfa Meal—Fine

Many feeders prefer Alfalfa Meal to Cut Red Clover on account of its high protein value and its powerful digestive properties.

Cut Red Clover

Cut Red Clover is one of the best green foods for winter egg-production. The grade we offer is the purest and best to be had.

Bird Foods and Remedies

Spratt's Egg-Flake and Canary Mixture. 16-oz. pkg.....	\$0 25	Postpaid \$0 30
Spratt's Cod-Liver Oil Cage Bird and Nestling Food. 4-oz. pkg.....	20	25
Spratt's Song Restorer. 4-oz. pkg.....	25	30
Spratt's Tonic for Birds. 1-oz. bottle.....	25	30
Bird Manna. Keeps cage birds in constant song, improves their plumage, and prevents disease...	15	20
Silver Brand Bird Gravel. 30-oz. pkg.....	15	20
Chamberlain's Bird Gravel, with Charcoal. 24-oz. pkg.....	15	20
Burnett's Bird Nesting. Pkg.....	10	15
Burnett's Canary Louse Powder. 1-oz. pkg.....	25	30

For prices see our monthly Poultry feed price-list accompanying this Catalogue

Darling's Blood Meal

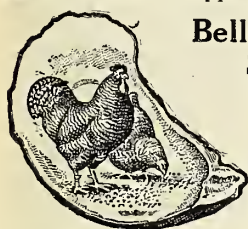
Darling's Blood Meal runs very high in protein (80 to 90 per cent) and contains very little moisture and fat. It is manufactured expressly for feeding purposes and is guaranteed to be absolutely pure.

Granulated Poultry-Bone

Made from fresh, clean green bone, from which the fat and moisture have been extracted. The pure bone is then dried and granulated before being sacked for shipment. Keep it before your hens all the time.

Poultry Bone-Meal

This is exactly the same product as the granulated bone, but it is ground up fine for convenience in feeding in a mash. It is especially valuable during growing and moulting periods and should be used to supplement meat scraps at these times.



Belle Brand Crushed Oyster Shells

Make Poultry Pay!

Crushed Oyster Shells have long been recognized as a most important article for poultry yards. They should be kept where the fowls can have easy access to them all the year round, as experience has demonstrated that fowls need them in summer as well as winter. They supply carbonate of lime in natural form, act as a grit, and produce a firm, hard shell. Belle Brand shells are dry, and, having been carefully screened, are free from dust and dirt.

We carry two sizes in stock, Coarse and Fine, the prices of which are the same.

Poultry Charcoal

Keeps poultry strong, healthy, and in good laying condition. Aids digestion, corrects wrong feeding and prevents disease. Fowls young and old should have free access to it at all times. We carry two sizes in stock—Medium and Fine.

Red Cross Health Grit

Since 1903



For Pigeons, Fowls, and Cage-Birds

Positively the Best. A manufactured mixture containing a great variety of gritty particles and materials with tonic properties, including everything the bird needs in proper proportions.

You save all other trouble and expense when using Red Cross, as only water and good feed in addition are required to keep birds in perfect health.

They Eat It Like a New-Found Luxury. All birds relish it. Contains in condensed form the best tissue-building ingredients for birds known to science, and the greatest variety of gritty matter. A reconstructive tonic mixture of only pure properties. Never use chicken grit for pigeons.

Good grain alone will not make hens lay, squabs plump, or birds sing; they have no teeth and must have grit to grind their food and it should be a palatable grit mixture they relish.

RED CROSS HEALTH GRIT

Makes Plump	Makes Prolific	No More
Squabs	Breeders	Roup
Whiter	Prevents	Because
Meat	Disease	It Makes
Squabs Mature	No More	Rich, Red
Sooner	Diarrhea	Blood

It is used at all leading shows, including the National, Poultry Championship Winner, and by the U. S. Government.

Its iron properties make it ideal for Flying Homers, and long-distance racers.

When you order feed, order Red Cross Health Grit.

Feed Your Hens



If you want eggs, and plenty of them, then feed By-Cod-Lo. It's a compound of Pure Cod-Liver Oil, Yeast, Dried Buttermilk, Blood Flour, and Gluten Meal—the greatest concentration of life-giving qualities ever compounded under one formula.

COD LIVER OIL contains vitamins A and D which are very essential to the growth of chicks and a great leg weakness preventative.

YEAST contains vitamin B, which is very vital to the growth of chicks; besides, yeast is a great aid to digestion.

BUTTERMILK, with its lactic acid, is a great aid to digestion, and a white diarrhoea preventative.

BLOOD FLOUR gives the animal protein that the chicks need. Besides being heavily charged with iron, which is found in blood flour, it is a white diarrhoea and leg weakness preventative.

BY-COD-LO can be used with wonderful results for hens that are under heavy laying strain. It supplies the vitality so essential at such a time. It keeps them in a strong, healthy condition, enabling them to stand the heavy laying strain without the bad after results, as it puts back the vitality that is taken away at such a time.

PROTEIN 50% FAT 10% FIBER 3%

Your birds will stand up in flesh and feather while under heavy laying strain when you feed By-Cod-Lo. Makes strong healthy chicks.

THIS IS OUR GUARANTEE

Regardless of what size package you buy, if you are not absolutely satisfied, come back and get your money. 2 lbs. \$1, 6 lbs. \$2.50, 25 lbs. \$7.50, 50 lbs. \$14. Test it at our risk.

Broschkowsky's Health Grit

For pigeons. Has a friend in every fancier who has tried it.

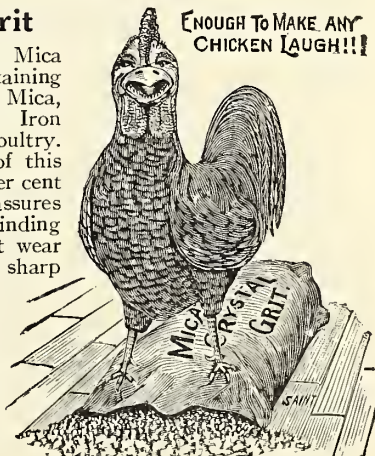
Every ingredient entering into the composition of Broschkowsky's Health Grit is the best obtainable, clean and is prepared amid sanitary surroundings. One trial will convince you of its superior quality. It contains nothing injurious of any nature; keeps your birds' digestive organs in prime order; provides the proper shell material; assists the birds in the moult; raises more and stronger youngsters; and wards off many troublesome diseases.

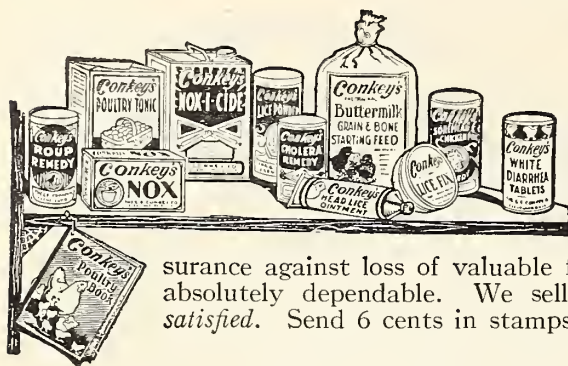
Mica Crystal Grit

Analysis proves that Mica Crystal Grit is a grit containing a proper combination of Mica, Quartz, Aluminum and Iron essential to all kinds of poultry. The peculiar formation of this grit, containing a large per cent of small flakes of Mica, assures at all times a sharp grinding surface. The grit will not wear smooth but will keep sharp until entirely worn out.

The grit wears out but does not dissolve, therefore giving a longer service than other grits.

Furnished in three sizes, "Poultry," "Pigeon," and "Chick," all at the same price.

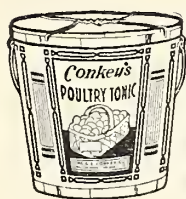




Have a Conkey Corner In Your Poultry-House. It'll Save Many Birds

Only vigorous, healthy birds can produce profits. Keep disease out of your flock by having on hand remedies for treating common ailments. A "Conkey Corner" is fine insurance against loss of valuable fowls. We recommend Conkey's Remedies because they are absolutely dependable. We sell them on this guarantee—*your money back if you are not satisfied*. Send 6 cents in stamps for valuable Poultry Book.

Conkey's Poultry Tonic



Unequaled as a laying tonic, moulting powder, chick conditioner, and poultry regulator. Not a stimulant, not a bit of filler, and no red pepper. It puts an edge to appetites, aids digestion, and helps your birds get more out of their feed. 1½ lbs. 25 cts., postpaid 30 cts.; 3¼ lbs. 50 cts., postpaid 60 cts.; 7 lbs. \$1, postpaid \$1.20; 12 lbs. \$1.60, postpaid \$1.85; 25 lbs. \$3, postpaid \$3.40.

Conkey's Roup Remedy.

Is recognized all over the world as the remedy for this deadly contagious disease. Always have it ready. 30 cts., 60 cts., \$1.20 and \$2.50; ppd. 35 cts., 65 cts., \$1.25 and \$2.60.



Conkey's Roup Pills. For individual treatment. 30 cts., 60 cts., and \$1.20; postpaid, 35 cts., 65 cts., and \$1.25.

Conkey's White Diarrhea Remedy.

Once you have used this old reliable preparation you will never be without it. As a preventive of bowel troubles, White Diarrhea and other digestive complaints, it has given great satisfaction for many years. Once started, diarrhetic conditions

often sweep away the whole hatch—hundreds of chicks. Play safe—keep this remedy in the drinking-water until the danger period is past. 30c., 60c., \$1.20; postpaid, 35c., 65c., and \$1.25; breeder size (1,200 tablets) \$4, postpaid, \$4.10.

Conkey's Limberneck Remedy. Relieves ptomaine poisoning, called "Limberneck." 50 cts.; postpaid, 55 cts.

Conkey's Gape Remedy. Relieves chicks of the choking gape-worm. 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.

Conkey's Canker Special. For canker and bronchitis; relieves and soothes. 50 cts.; postpaid, 55 cts.

Conkey's Cholera Remedy. Stops digestive disorders and so-called cholera. 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.

Conkey's Y-O

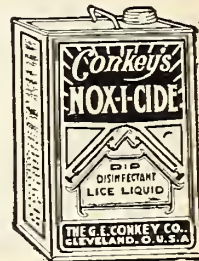
Yeast with Cod-Liver Oil For feeding poultry

Successful poultry raisers are finding these two ingredients indispensable in poultry rations. By supplying needed vitamins, cod-liver oil and yeast banish leg weakness and other chick troubles, promote rapid and vigorous growth, and keep hens in the pink of condition, able to produce a heavy lay. Both commodities must be used, but to get a supply of both and add them to poultry rations is a troublesome, sticky job, and also expensive. Conkey's Y-O, which is a combination of yeast and cod-liver oil made by a special patented process, solves the problem in an economical way. The product comes in the form of a dry chocolate-brown powder, which is free running and readily mixed with any poultry mash.

Lb. 65 cts., 2 lbs. \$1.15, 5 lbs. \$2.50, 25-lb. drum \$11.25; postpaid 75 cts., \$1.25, \$2.70 and \$11.65; 50-lb. drum \$20, 100-lb. drum \$32.50.

Conkey's Nox-i-cide

A disinfectant, dip, lice liquid, germ-destroyer, and spray. Has a hundred uses in the home, on farm, in poultry-yard. Nox-i-cide mixes with water, making a cheap, effective germicide. Cleans and purifies coops, houses, runs, brooders, incubators, founts, and utensils. Fine for household and sickroom. Reliable for barns and outhouses. Pt. 50 cts., qt. 80 cts., 2 qts. \$1.30, gal. \$2, 5 gals. \$9.25, 10 gals. \$17.75, express extra. Ask for barrel prices.



Conkey's Chicken-Pox or Sorehead Remedy. Very effective for this repulsive disease. 25c. and 50c.; postpaid, 30c. and 55c.

Conkey's Scaly Leg Remedy destroys parasites causing this troublesome affection. 25 cts.; postpaid, 30 cts.

Conkey's Poultry Conditioner quickly brings back to normal after sickness. Highly recommended for showroom use. Just good tonic. 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.

Conkey's Lice Powder destroys body lice. They suck the energy from your flock. Dust Conkey's on your hens and in the dust-bath. 20 cts., 35 cts., 75 cts., and \$2.60; ppd., 25 cts., 40 cts., 85 cts., and \$2.85.

Conkey's Head Lice Ointment gets the big murderous fellows that bore through the little chicks' skulls. 10 cts. and 25 cts.; postpaid, 15 cts. and 30 cts.

Conkey's Lice Fix. An ointment, applied easily and quickly. Three or four applications a year keep the bird practically free from body lice. 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.

Conkey's Mite Liquid made especially to destroy the spider-like mites that laugh at ordinary lice preparations. Qt. 60 cts., 2 qts. 90 cts., gal. \$1.50; postpaid 70 cts., \$1.10, and \$1.80; 5 gals. \$7. Express extra.

Blackhead Remedy. This disease usually develops in young turkeys. 50 cts.; postpaid, 55 cts.

Poultry Worm Remedy. 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.

Conkey's Head Lice Ointment gets the big murderous fellows that bore through the little chicks' skulls. 10 cts. and 25 cts.; postpaid, 15 cts. and 30 cts.

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Blackhead Remedy. This disease usually develops in young turkeys. 50 cts.; postpaid, 55 cts.

Poultry Worm Remedy. 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.

Conkey's Poultry Laxative

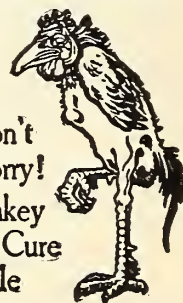
Wherever a laxative or purgative is needed this remedy is just the thing for birds—by varying the dosage you can produce either a mild or a strong effect. Works without a debilitating after-effect.

Experts say, and we have found through experiments, that a poultry laxative given every week or two not only keeps birds in better condition but increases the egg-yield very materially. If you are not employing this method, try it and be convinced.

Packages, 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.; breeder size (5 lbs.) \$2.75, postpaid, \$2.90.



Don't
Worry!
Conkey
Will Cure
Me



Pratts

Poultry Regulator Poultry Remedies Buttermilk Baby Chick Food

HEALTHY BIRDS AND LOTS OF EGGS, THE TWO BIG THINGS IN POULTRY-RAISING, USUALLY FOLLOW THE USE OF

Pratt's Poultry Regulator

Pkgs. 25 cts., 50 cts., \$1.10; postpaid, 30 cts., 60 cts., \$1.30; 12-lb. pails \$1.65, postpaid \$1.90; 25-lb. pails \$3, postpaid \$3.40; 100-lb. drums \$10

It builds up vitality, promotes sound digestion, sharpens appetite, thus helping to put birds into condition for heavy egg-laying or winning blue ribbons.

Given to breeding stock it increases the fertility of eggs, strong in vitality, that will hatch chicks that will grow. Use it if you want big hatches of healthy chicks that will develop into husky pullets and cockerels.

Pratt's is the original Poultry Regulator of America and is in use by the most successful poultry raisers everywhere.

It will help prevent many of the common poultry ailments.



Roup is the alert foe of poultry. Its ravages can be prevented and protection given your flocks by using

Pratt's Roup Tablets or Powder

Its healing properties are quickly taken into the system. For genuine Roup as well as colds and similar diseases. 25 cts., 50 cts., and \$1; postpaid, 30 cts., 55 cts., and \$1.10.

Pratt's Powdered Lice-Killer

sprinkled on hens, in nests, dust-baths, etc., will quickly clean up the poultry house. Non-irritating; non-explosive. In sifting top boxes.

An unequalled powder for killing lice on horses, cattle, hogs, dogs, and cats; moths, insects and bugs in houses, stables, and barns. Safe and effective for killing plant-eating insects. 12 cts., 25 cts. and 50 cts.; postpaid 15 cts., 30 cts. and 60 cts.

When hens are not laying, look for lice. These pests cost poultrymen many dollars.



Pratt's Sore-Head and Chicken-Pox Preparation

It acts quickly, checking the spread of the contagion and healing the sores. We guarantee Pratt's Sore-Head (Chicken-Pox) Preparation. 30 cts. and 60 cts.; postpaid, 35 cts. and 65 cts.

Pratt's Special Compound

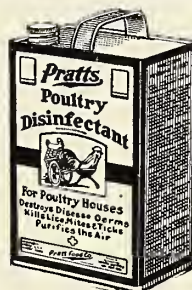
It is administered in the drinking water and will be found of great value in aiding in the relief of indigestion, sour crop, dysentery, diarrhea, and bowel trouble. Packages, 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.

Pratt's Condition Tablets

Don't get the idea these tablets are for show birds only, just because they are extensively used by fanciers to keep their exhibition stock in the pink of condition. They are for utility birds as well. Will put flesh on the birds. Help prevent colds, roup, and liver troubles. 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.

Pratt's White Diarrhea Tablets

In the drinking water from the first drink. This remedy has saved many dollars' worth of chicks for poultry raisers. You can depend on it. 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.



Keep disease away from poultry. Kill lice and mites. Disinfect the poultry house with

Pratt's Poultry Disinfectant

A quick, effective germicide, insecticide, and deodorant. As a spray around stables, cow- and hog-lots, and for use on dogs, cats and pets generally, it is unsurpassed for effectiveness. It is non-irritating and its pleasing, clean odor makes it admirable for household use. Qt. 55 cts., 2 qts. 90 cts., gal. \$1.50; postpaid 70 cts., \$1.10 and \$1.80; 10-gal. can \$12.25.

Pratt's Bronchitis Tablets

This is safe and quick and will usually save your birds. Improvement is almost immediate, the suffering being relieved in a short time. This remedy is put up in tablet form so that individual treatment can be given when desired. 25 cts. and 50 cts.; postpaid, 30 cts. and 55 cts.

Pratt's Red Mite Special

Red Mites, fleas, lice, blue bugs, ticks, and other blood-sucking vermin cannot exist where it is used. Painted or sprayed around the poultry-house, or nests, roosts, etc., it is sure death to all mites and lice. Powerful, efficient, lasting. Use it where others have failed. It will surprise you. Qt. 50 cts., 1/2 gal. 90 cts., gal. \$1.50; postpaid 65 cts., \$1.10 and \$1.80.

Pratt's Gape Compound

An effective, easy remedy that will prevent further losses and save the sick chicks. Try it. 25c. and 50c.; postpaid 30c. and 55c.

Pratt's Head-Lice Ointment

Kills the head lice instantly. It soothes, heals, is safe to use on all parasitic diseases. Box, 30 cts.; postpaid 35 cts.



Pratt's Scaly-Leg Ointment

Usually affords relief in a few days. It kills the parasites which cause the trouble and promotes a new, healthy growth of skin to take the place of the diseased parts. 30c. and 60c.; postpaid 35 cts. and 65 cts.

Pratt's Worm Remedy

An effective remedy for worms in poultry. 2 1/2-lb. pkgs. 50c., postpaid 60 cts.; 25-lb. bag \$3, postpaid \$3.35.

We Recommend Burrell-Dugger Poultry Remedies

Burrell-Dugger Poultry Remedies have been used by thousands of poultry owners, from coast to coast, for many years, and they have more than made good.

They are specialized remedies for poultry, produced in an up-to-date modern laboratory, just as scientifically and carefully as medicines for human beings.

Knowing the satisfaction which Burrell-Dugger remedies have given our customers, we do not hesitate to recommend them strongly. Every one is guaranteed to satisfy you, or your money will be promptly refunded in full.



**STOPS
CHICKS
DYING**

Recommended and guaranteed for the prevention and treatment of white diarrhoea, cholera and black-head.



Every year, over half the chicks hatched die from chick cholera, diarrhoea, and other bowel diseases. This has been shown by U. S. Government reports.

Avicol, used in the drinking water, will stop these losses. Thousands of poultrymen will tell you that they now raise nearly every chick of every hatch. Many of them were losing chicks right and left before they started using Avicol. Within a few hours after receiving Avicol, the sick, drooping chicks begin to revive and soon are lively and healthy.

Easy to give. Simply drop an Avicol Tablet in the drinking water. The chickens doctor themselves.

After you have once tried Avicol, you would no more think of trying to raise baby chicks without it than you would think of denying them food.

Avicol should be in the very first water the little chicks drink. And it costs so little that it will pay you to keep it in the drinking-water all the time, for all the flock, old and young.

Avicol is fully guaranteed. Your money will be promptly refunded without question or quibble if it doesn't satisfy you perfectly.

Price, 50 cts.; postpaid 55 cts.; large size (holds two and one-half times 50-ct. size), \$1, postpaid \$1.10.

**TALCIMIZED
SODIUM FLUORIDE**

**KILLS
CHICKEN
LICE**

The U. S. Department of Agriculture and most leading State Agricultural Colleges endorse and recommend the Sodium Fluoride method of killing poultry lice.

Lice have probably cost the poultryman more money than any other poultry ailment. Wherever present, their effect is seen in stunting the growth, injuring the health, and reducing the egg-production of the whole flock.

After years of study and after numerous tests they report it the most effective, positive way to get rid of poultry lice. They say it kills all lice—both old and young—including the lice that hatch from eggs present on the fowl at the time of treatment.

For positive results be sure to get the genuine Talcimized Sodium Fluoride (call it T. S. F.) put up by the Burrell-Dugger Co. It is specially processed and prepared especially for poultry use, and is in a convenient, shaker-top package, bearing the U. S. Government's instructions for applying. One small package will treat about 40 chickens.

Price, small size 35 cts., postpaid 40 cts.; large size (twice as much), 60 cts., postpaid 70 cts. Special size (five times 60-ct. size), \$2.50, postpaid \$2.65.



DON SUNG

Makes Hens Lay

GUARANTEED

Don Sung (Chinese for egg-laying) acts directly on the egg-laying organs and is beneficial in every way. It makes hens healthy and happy. They scratch and sing. Pullets develop earlier. The whole flock lays regularly in any season, any weather, when eggs are scarce and high. Don Sung is no trouble to use. It costs nothing to try.

We invite any poultry-raiser to make the following test, entirely at our risk: Give Don Sung to fifteen hens. Then watch results for 30 days. If it doesn't show you a big increase in eggs, if it doesn't pay for itself and pay you a good profit besides, your money will be promptly refunded.

Trial Size 50 cts., postpaid 55 cts.; \$1 size, postpaid \$1.10 (3 times 50-ct. size); \$5 size, postpaid \$5.10 (6 times \$1 size).



Roup-Over

TRADE-MARK

"The Over-Night Roup Remedy"



**A New, Prompt, Positive
Guaranteed Treatment**

For

**ROUP, CANKER and
COLDS IN POULTRY**

ROUP WORKS FAST—KEEP ROUP-OVER HANDY

Keep a bottle of Roup-Over on hand, and at the first symptom of a cold in your flock, start giving it to every affected bird. It clears the air-passages and brings relief with magic quickness. Roup-Over is easily given. It comes in a liquid form and a few drops does the work.

This famous remedy is positively guaranteed to give complete, prompt, and positive results, or your money will be refunded in full. There is nothing on the market like Roup-Over for roup, colds, and canker.

Price 50 cts., postpaid 55 cts.; large size \$1, postpaid \$1.10 (three times 50-ct. size).



THESE REMEDIES ARE SCIENTIFICALLY MADE IN THE LABORATORIES OF THE BURRELL-DUGGER CO.

Rust's Poultry Preparations

Rust's Poultry Preparations have been used extensively by poultry raisers for the past thirty years, and are considered by many as the best on the market. We sell them because we know they are absolutely reliable and we can recommend them to our poultry friends.



Rust's Egg-Producer

You can feed for eggs just as you can feed for milk, beef, or fat pork. You can get plenty of eggs at all seasons by feeding Rust's Egg-Producer. This preparation supplies just what the hens need for producing eggs, plumage, growth and development, and in the exact proportions required. It is not a stimulant and does not exhaust the fowls; but being composed of the elements which a fowl's nature requires, it keeps the poultry in first-class condition. Feed every morning; at first, at the rate of one tablespoonful to a quart of meat or wheat bran to each 12 to 15 fowls. Mix it thoroughly and add sufficient water to make it of a crumbly consistency for feeding. Do not wet it enough to make it sticky. After the hens commence laying freely, give the same quantity in the same manner once a week to keep them in good laying condition.

PRICES

	Postpaid
1-lb. pkg.	\$0 25
2½-lb. pkg.	50
6-lb. pkg.	1 00
10-lb. pkg.	1 50
25-lb. pkg.	3 25

	Postpaid
	\$0 35
	60
	1 20
	1 75
	3 65



Rust's Roup Pill

These pills are intended for individual treatment of fowls and pigeons. They act directly on the glands and mucous membranes, allay feverish symptoms, and are believed to be one of the best remedies known for roup, catarrh, colds, and distemper in fowls, and many pigeon diseases.

PRICES

	Postpaid
50 pills in box.	\$0 25
112 pills in box.	50
250 pills in box.	1 00

	Postpaid
	\$0 30
	60
	1 10

Rust's Roup Powder

PRICES

	Postpaid
3-oz. box.	\$0 25
8-oz. box.	50
18-oz. box.	1 00

	Postpaid
	\$0 30
	60
	1 10

Ocolum

Scientific Remedy and Preventive for Cholera, Roup, White Diarrhea, and Sore Head; also Cure for Gapes

Any man who does not cure sick chickens, turkeys, and ducks with Ocolum bought of us gets his money back on request.

Give your hens Ocolum and they will get heavier, their combs will get red and stay red; they will lay much better and more regularly, and in the fall and winter, you will get eggs while the other fellow is vainly looking for the eggs that do not come.

Give your chicks Ocolum—they will eat greedily, grow rapidly, and develop quickly into broilers and pullets.

	Postpaid
Bottle.	\$0 50
Large Bottle.	1 00

Roto Pigeon Salt

A Necessity to the Health of Pigeons

Roto Pigeon Salt is compressed into bricks that are not affected by any climatic conditions. Size of Bricks, 7½ x 3½ x 2 inches.

	Postpaid
1 Brick.	\$0 25
12 Bricks.	2 25

	Postpaid
	\$0 35
	2 75



Rust's Climax Condition Powder

For Cholera, Gapes, Diarrhea and Other Poultry Diseases. The regular use of Rust's Climax Condition Powder in the feed three or four times a week (beginning soon after the chickens are hatched) will nearly always keep the fowls free from disease and quickly develop their plumage and vigor. Experience shows that Rust's Climax Condition Powder is equally good for horses, stock, cattle, and hogs. This powder acts on the blood, liver, kidneys, and urinary organs, promotes the digestion, increases the appetite and improves the secretion, thereby causing a healthful condition of the animal. Rust's Climax Condition Powder contains no antimony, arsenic, or anything harmful.

PRICES

	Postpaid
13-oz. pkg.	\$0 25
2-lb. pkg.	50
5-lb. pkg.	1 00
8-lb. pkg.	1 50
20-lb. pkg.	3 25

	Postpaid
	\$0 35
	60
	1 15
	1 70
	3 55

Rust's Lice Powder

PRICES

	Postpaid
5-oz. box.	\$0 10
15-oz. box.	25
48-oz. box.	50

	Postpaid
	\$0 20
	35
	60

Rust's Egg Record

For keeping a record of eggs (good for any twelve months). Mailed free on request.

Get Rid of Your Rats

"If a man can write a better book, preach a better sermon or make a better Mouse Trap than his neighbor, though he build his house in the woods, the world will make a beaten path to his door."—HUBBARD. See page 161.

French's Poultry Mustard

The Original Poultry Mustard in America. Absolutely pure and prepared to produce more excellent results. Used and recommended by thousands of breeders, fanciers, and practical poultrymen.

It stimulates. It invigorates. It rebuilds lost and wasted tissues. It shortens the moulting period and starts the hens laying. A fair trial will convince you of its worth.

A teaspoonful for every six hens, mixed with the wet or dry mash, should be fed each morning.

	Each	Postpaid		Each	Postpaid
1½-lb. box.	\$0 45	\$0 55	10-lb. box.	\$2 40	\$2 60
3-lb. box.	75	85	25-lb. box.	5 50	6 00
5-lb. box.	1 25	1 40	50-lb. keg.	10 50	
			100-lb. keg	\$20 each	

Roto Rabbit Salt Spools

No feeder or holding device necessary as Spools are fastened to wall by means of nail or screw through hole in center.

	Postpaid
Size: 2 inches diameter, 1½ inches thick.	
1 Spool.	\$0 10
12 Spools.	1 00

	Postpaid
	\$0 15
	1 15



ONE NIGHT ROUP CURE

Lippincott's Has No Equal for

Roup, Gapes, Canker, Chickenpox, Cholera, or Diarrhea

Lippincott's One-Night Roup Remedy has never failed to give quick results when used in the proper way and the birds properly housed. 25 cts., 50 cts., and \$1 per bottle; postpaid, 35 cts., 60 cts., and \$1.10.

Whiting's Roupene

A real remedy for roup, canker, and diphtheritic roup. You do not have to quarantine the roupie fowls. 50 cts. and \$1 per bottle, postpaid.

Whiting's White Diarrhea Remedy

It destroys the disease germ, cures the chicks, and prevents at once the spread of the disease. 50 cts. and \$1 per bottle, postpaid.

Dr. Hess' Poultry Panacea



makes poultry healthy; makes hens lay; not a stimulant, but a tonic, that tones up the dormant egg organs, brings back the scratch and cackle, and compels each hen to put her share of eggs in the market basket. It also contains internal antiseptics that counteract disease; insures a healthy, singing poultry flock. Cost but a trifle—a penny's worth enough for thirty hens per day.

	Each	Postpaid
1½-lb. pkg.	\$0 25	\$0 35
5-lb. pkg.	75	90
12-lb. pkg.	1 50	1 70
25-lb. pail.	3 00	3 35
100-lb. drum.	10 00	

Lee's Egg-Maker

	Postpaid	Postpaid
2-lb. pkg.	\$0 40	\$0 50
5-lb. pkg.	90	1 05
12-lb. pail.	2 00	2 25
25-lb. pail.	\$3 75	\$4 10
100-lb. drum	12 00	

Lee's Germozone

20-tablet pkg. 25 cts.; 75-tablet pkg. 65 cts.; 200-tablet pkg. \$1.25; postpaid 30 cts., 75 cts., and \$1.40.

Lee's Egg-O-Hatch

For applying to eggs during incubation to strengthen the growing chicks, to weaken the egg-shell, and to better the hatch. 50 cts.; postpaid, 55 cts.



CARBOLINEUM

Made in U. S. A.

GUARANTEED TO KILL CHICKEN MITES IN POULTRY-HOUSES. APPLIED ONCE A YEAR

More Eggs—Healthy Chickens

Avenarius Carbolineum will not only kill all vermin by direct contact, but, if sprayed or brushed, it will penetrate all cracks and crevices and reach the mites at close quarters and effectually stop their propagation. Also see page 140.

Guarantee. We guarantee that one thorough application of Avenarius Carbolineum, either by brush or sprayer, to the interior walls, dropping-boards, roosts, etc., of buildings, after a previous cleaning, and no matter whether they are of wood, tar paper, or plaster, will exterminate mites in same for a whole year, or purchase money will be refunded.

PENNSYLVANIA STATE COLLEGE DEPARTMENT OF POULTRY HUSBANDRY, PROF. H. C. KNADEL, State College, Pa.: We have been using Carbolineum with very good success and you can rest assured that when we are in need of a good mite destroyer you will receive our order.

PRICES

Gal. can \$1.75; 5-gal. drum, \$1.45 per gal.; 10-gal. drum, \$1.30 per gal.; 35-gal. steel barrel, \$1.10 per gal.; 55-gal. steel barrel, \$1.05 per gal.

Nu-Life Remedies

Nu-Life Pills

For poultry, pigeons, and turkeys. Unexcelled conditioner for exhibition poultry, pigeons, and pit games. Unequaled as a remedy for going light, bowel trouble, indigestion, etc. A valuable aid in treating roup, and, if given in time, will stop most of the ills known to afflict poultry, pigeons, and turkeys. Should be given to all birds that are run down, off their feed, or not producing fertile eggs. Two sizes, 30 cts. and \$1, postpaid.



Nu-Life Special Pills

These pills are a highly concentrated combination of iron, nux vomica, quinine, pepsin, cod-liver oil, etc. They are especially valuable for the small mouth varieties of pigeons as they are considerably smaller than the regular Nu-Life Pills. They will accomplish the same results. Price, 40 pills, 50 cts.; 100 pills, \$1, postpaid.

Nu-Life Tonic (In Powder Form)

Is intended for flock or individual treatment. Is valuable to the busy fancier who has no time to give Nu-Life Pills. It can be placed in the mash-feed or drinking-water. Excellent for bowel trouble in old or young chickens and will quickly restore stunted chicks back to a healthy growth. Two sizes, 25 and 50 cts., postpaid.

Nu-Life Germicide Tablets

For the prevention and treatment of germ diseases affecting the mucous membranes and digestive tracts of fowl or beast. Especially recommended for the treatment of roup and canker in poultry and pigeons, snuffles and colds in rabbits and pet stock and for cuts, bruises, sores, etc.

One package will make 50 gallons of medication for internal use or 50 quarts for external use. Sold in one size, 50 tablets, 50 cts., postpaid.

NU-LIFE REMEDIES are sold under a guarantee. If for any reason you are not satisfied, your money will be refunded.

KILL POULTRY LICE

WITH

Bee Brand



INSECT POWDER

A safe, harmless, and effective destroyer. Dust it in feathers, under wings, and in nests. Its occasional use keeps poultry free from lice and assists in heavy egg-production. Non-poisonous and absolutely harmless to poultry, animals, and mankind. Bee Brand Insect Powder also kills flies, fleas, mosquitos, ants, roaches, bed-bugs, cooties, moths, and many other insects. Free booklet on request.

In sifting-top tin canisters, 10 cts., 25 cts., 50 cts., \$1; postpaid, 15 cts., 30 cts., 55 cts., \$1.10

Flyosan

A Chemically Prepared Liquid Insecticide

instantly destroys all forms of insect life.

Flyosan actually kills flies, mosquitoes, cock-roaches, water-bugs, ants, moths, bed-bugs, fleas, chicken-lice, hog-lice, cattle-lice, dog-lice, etc., by the simple expedient of applying with an ordinary spray, wherever and whenever required. The results you obtain from a single application will convince you that Flyosan is the most positive and efficient product of its kind.

Flyosan disinfects and deodorizes. It is non-poisonous and non-explosive. It hasn't a single drawback. Even the odor is pleasant—to everything except bugs.

DO YOU OWN CHICKENS?

Keep off lice with Flyosan and prevent cholera by spraying the hen-house every week.

PRICES

		Postpaid
1/2 Pint.....	\$0 50	\$0 60
Pint.....	75	85
Quart.....	1 25	1 40
Half-Gallon.....	2 25	2 50
Gallon.....	4 00	

Lice Exterminators

LEE'S LIQUID LICE KILLER

		Postpaid
1 quart.....	\$0 60	\$0 75
2 quarts.....	90	1 10
1 gallon.....	1 50	1 80

LEE'S LOUSE POWDER

1-lb. pkg.....	25	30
2 1/2-lb. pkg.....	50	60

HESS'S LOUSE-KILLING POWDER

1-lb. pkg.....	25	30
2 1/2-lb. pkg.....	50	60

LICEMIST. This liquid throws off vapors or fumes which quickly destroy head and body lice as well as other insect pests which infest poultry. When the house or coop is treated with LICEMIST according to directions with each bottle, these vapors penetrate the feathers of the birds, as well as cracks, crevices, scratching material, etc., in the house or coop, and kill insects without the necessity of handling each bird.

		Postpaid
Bottle.....	\$1 00	\$1 10
3 bottles.....	2 50	2 65
1 gallon.....	4 00	4 30



Good News
for
Poultry Raisers
Produces Marvelous
Results

STOPS

Roup
CankerChicken-Pox
CoccidiosisWhite Diarrhea
Blackhead

A powerful germ-killer with no poison—no acid—no oil. Clean—colorless—no odor afterwards.

Used in drinking-water, prevents spread of disease. Cleanses infected spots—kills the germs and cannot harm baby chicks. Ideal disinfectant for brooders and incubators. Kills odors and leaves no smell of itself.

The world's best poultry disinfectant.

Used by poultry farmers everywhere.

READ WHAT THEY SAY ABOUT IT

General Laboratories, Madison, Wis.

Gentlemen: B-K is used exclusively in our poultry-house. Some day I want to tell you the whole story of what B-K has done for our large flock of Buff Leghorns.

Last year, as a result of having shown our Buffs at the leading shows of this country, they contracted chicken-pox, and later on roup, and it looked as if we would lose every bird in our flock. It was very cold and I went down to the farm along with two or three men, and we took 150 birds off the roost, and dipped them in a solution of B-K. We also sprayed each bird's mouth and cleaned up the entire flock and saved the day. B-K in this one instance saved me \$3,000 for I think I can truthfully say that we have one of the most beautiful flocks of birds in the U. S., and it has taken us a good many years to bring them up to this standard.—JAMES FARMS, (By W. D. James).

General Laboratories, Madison, Wis.

Gentlemen: I could not raise chickens without B-K. In March I bought 50 white Wyandotte baby chicks. They soon came down with white diarrhea and were dying fast. I was getting discouraged, when one of my neighbors said to me, "Why don't you try B-K. It is good for calf scours and should be good for white diarrhea." So I got some B-K and began giving it in the drinking-water. They began to get well at once, and I did not lose any more. Since then I bought fifty more chicks from the same source as the first lot, and the first thing they got from me was B-K in all their drinking-water. I still have every one of them, never having lost one. I think B-K just kills that white diarrhea germ that most incubator chicks have.

Hoping my success will help somebody else.—Mrs. R. F. HEWETT.

Just try it. Money-back guarantee on every package.

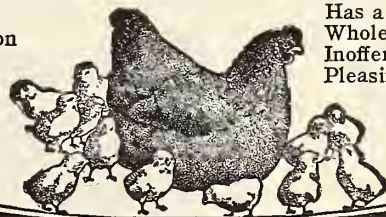
CHEAP TO USE—B-K is concentrated—a little goes a long way.

PRICES

1-qt. bottle.....	\$1 25	5-gal. jug.....	\$12 50
1-gal. bottle.....	3 00		

Write for bulletin 213C on poultry

Disinfectant
Won't Poison
Won't Explode
Won't Burn



Has a Clean,
Wholesome,
Inoffensive, and
Pleasing Odor
The Surest
Lice-Killer
and
Disinfectant



A single quart is all that is necessary to rid 100 hens of lice, mites, and germ filth; it cures and prevents all ordinary poultry ailments and diseases—contains nothing that is injurious—insures cleanliness—and safeguards your poultry's health and your own profits.

		Postpaid
8-oz. can, making 6 gals. of fluid.....	\$0 35	\$0 45
Qt. can, making 25 gals. of fluid.....	75	90
1/2-gal. can, making 50 gals. of fluid.....	1 25	1 45
1-gal. can, making 100 gals. of fluid.....	2 00	2 30
5-gal. can, making 500 gals. of fluid.....	8 00	

Rutland Egg Preserver



Prepared from a high grade of water glass manufactured especially for the purpose.

There are many so-called egg preservers on the market; some are inferior water glass; some are not water glass at all. Water glass, not especially prepared for preserving eggs, may contain too much alkali; water glass can sometimes be bought in bulk by the quart, but this is not a safe way to purchase it as one knows nothing about the strength of the solution. This is a most important point in the preserving of eggs. The cost of eggs is such that it does not pay to take chances.

The prudent housewife uses only an egg preserver prepared especially from a high grade of water glass—**Rutland Egg Preserver.**

A one-pint can will be sufficient for preserving about eight dozen eggs; the contents of a one-quart can will preserve from fifteen to twenty dozen.

Pint Can.....	\$0 15	Postpaid	\$0 30
Quart Can.....	25		45
Gallon Can.....	90		1 20

O. K. Sanitary Poultry Litter

THE IDEAL PRACTICAL LITTER THAT COSTS SOME POULTRYMEN NOTHING

This wonderful peat moss litter pays the poultry keeper in two ways—besides saving labor and trouble and insuring most healthful sanitary conditions.

First, when once the proper amount is put in your poultry-house, you are through for the season. O. K. Sanitary Litter does not have to be taken out like hay, straw, or other material that soon becomes filthy and dangerous. O. K. Litter absorbs the moisture of the droppings, coats over the solids, remains clean and effective for months, because it is light and very porous. Prevents odors, avoids dampness.

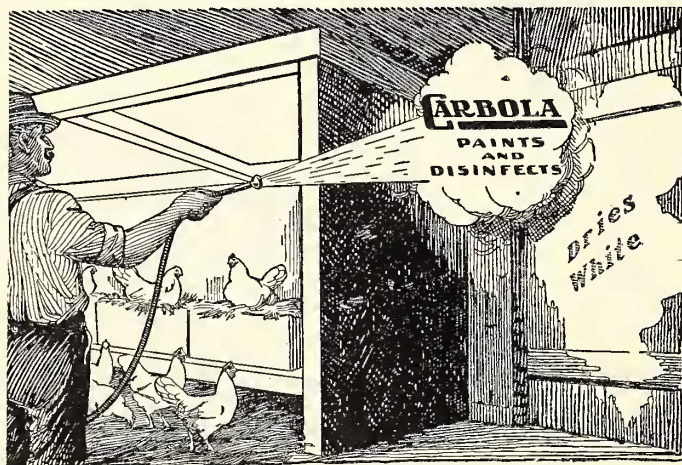
Second, O. K. Sanitary Poultry Litter is most economical. Its first cost by the bale is only a trifle more than hay, but as it lasts for months, it is far cheaper in the end. And all the time it is saving in the labor of removing and replacing. But above that there is another saving—a big profit to the user—and that is the worth of the used litter as a most valuable fertilizer.

Some poultrymen sell the "seasoned" litter to gardeners, florists, and others for more than the original litter cost. Others realize what this powerful nitrogen-filled litter is worth and use it themselves. Either way it has paid a big profit.

Use it for your laying-houses and for brooders in the spring. Put it on the dropping-boards.

Bales weigh about 175 pounds and cover about 80 square feet, 3 inches deep. Price, \$4 per bale; 5-bale lots, \$3.75 per bale.

Small sample bale, sufficient to cover 8 square feet, 2 inches deep (enough for the ordinary brooder) \$1.10, postpaid \$1.25.



PAINTS AND ALSO DISINFECTS • DRIES WHITE

CARBOLA

The Disinfecting White Paint

So Easy to Use

In Poultry Houses, Cow-Barns, Etc.

Carbola is a white paint and powerful disinfectant combined in powder form. Simply stir the powder in a pail of water and it is ready for brush or sprayer—no waiting or straining. *Does not clog sprayer. Won't peel or flake.*

The powerful disinfectant does not evaporate but keeps its strength on the walls. Carbola will not spoil even in water and may be kept standing in pail to be used as wanted. One pound covers about 100 square feet.

Results Are Sure and Certain

Carbola is neither poisonous nor caustic—harmless to the smallest chick or stock that licks a painted surface. It gives walls and ceilings a smooth, white finish, increases the light, improves the appearance, and helps make buildings clean, sweet-smelling and free from mites and contagious disease germs. There is nothing better than Carbola for dairies, poultry-houses, cellars, dog-kennels, rabbit-hutches, garages, tree trunks, etc.

It has been used for years by more than 100,000 dairy and poultry farmers and by agricultural colleges and experiment stations. We have a big file of letters from farmers and storekeepers praising it. Give it a trial—you will never regret it.

As a Louse Powder for use on cattle, poultry, horses, hogs, dogs, etc., the dry powder will be found most satisfactory. The dry powder is applied like any other louse powder, and is very effective—a first-class louse powder at 10 cts. a pound.

5 lbs. 75 cts., postpaid 90 cts.; 10 lbs. \$1.25, postpaid \$1.50; 50 lbs. \$5, postpaid \$5.75; 200 lbs. \$18, not prepaid.



Miller's A-1 Products

"BATTLE CREEK HEALTH-FOOD FOR DOGS"

Years have been spent in perfecting a balanced food for dogs of all ages and all breeds by our health-food experts and we offer for your approval Miller's A-1 Products. Only the best grains, Government-inspected beef with calcium phosphate of the correct proportions, are used in the manufacture of these high-grade dog-foods.

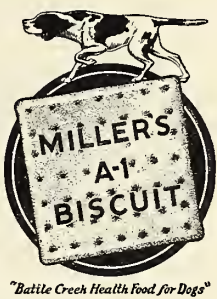
Miller's A-1 Biscuit can be fed to all breeds over six months old. It is very good for the development of teeth and is a bone and muscle builder.

Kibbled Biscuit is the same as Biscuit, only in broken form, which makes it more convenient for mixing with meat, soups, broth, gravies, vegetables, milk, eggs, and the like.

Puppy Meal is especially adapted for the tender digestive organs of young puppies as soon as they are old enough to eat solids.

Ration is the most economical cereal-meat-food in granular form that can be fed to puppies as well as grown dogs.

Place a trial order which will have our usual prompt attention and is sold with a money-back guarantee.



Ration	Postpaid	Biscuit	Postpaid	Kibbled Biscuit	Postpaid	Puppy Meal	Postpaid
5-lb. carton..\$0 75	\$0 90	2-lb. carton..\$0 35	\$0 45	2-lb. carton..\$0 40	\$0 50	2-lb. carton..\$0 40	\$0 50
25-lb. sack... 2 00	2 35	25-lb. sack... 2 75	3 10	25-lb. sack... 3 00	3 35	25-lb. sack... 3 00	3 35
50-lb. sack.... 3 50		50-lb. sack.... 4 50		50-lb. sack.... 5 00		50-lb. sack.... 5 00	
100-lb. sack.... 7 00		100-lb. sack.... 8 50		100-lb. sack.... 9 00		100-lb. sack.... 9 00	

Prices on larger quantities upon application

FOR DOGS Perfection Dog Food FOR PUPS

A perfectly balanced Meat-Cereal Food suitable for every day in the year feeding

For the convenience of the many dog and kennel owners in our territory, we wish to advise that a complete stock of Perfection Dog Food, in the various convenient sizes, is always on hand, ready for immediate delivery.

Since the stocking of Perfection, our records

show a steady increase in sales. This, combined with our "repeats" from our regular customers, warrants us to believe that Perfection is giving the best of results and should be a sufficient guaranty to warrant the placing of at least a trial order.



Prices and Sizes			
	Postpaid		
5 lbs.	\$0 75	\$0 90	50 lbs. \$3 50
10 lbs.	1 25	1 45	100 lbs. 7 00
25 lbs.	\$2 00	\$2 35	500 lbs. 32 50

Special prices on larger quantities

Spratt's Foods for Dogs "The Backbone of the Canine Race"

The dog constitution needs a dog diet. The conditions under which dogs are at present bred and reared make necessary a diet which will provide all the food elements contributing to the formation of bone and muscle, the building and storing up of energy, stamina and vitality, and which will assist to maintain the highly organized canine brain. For sixty years Spratt's have made dogs and their requirements the subject of continual observation and research; and today for every dog, old or young, healthy or sick, there is a Spratt's Food guaranteed to suit exactly his requirements. Throughout the world Spratt's Foods are today the diet of millions of the fittest dogs—the diet directly responsible for their alertness, cleanliness, health, and good spirits.

Spratt's Meat Fibrine Dog Cakes. The standard dog food. Used at the leading kennels and dog shows throughout the world. A staple and constant food for all breeds of dogs. Carton, 35 cts., postpaid 45 cts.; 5 lbs. 75 cts., postpaid 90 cts.; 25-lb. box \$3.15, postpaid \$3.50; 100-lb. box \$12.

Spratt's Puppy Biscuits. The standard puppy food. A perfect and whole food for puppies of all breeds. Carton, 40 cts., postpaid 50 cts.; 25-lb. box \$3.30, postpaid \$3.65; 100-lb. bag \$12.

Spratt's Ovals. The pocket Dog Biscuit. Carton 40 cts., postpaid 50 cts.

Spratt's Fibo. A granulated food. Very appetizing and highly recommended for shy and dainty feeders as a change in diet.

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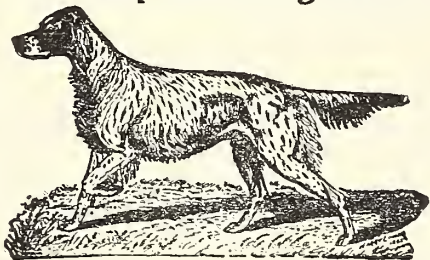
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